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ORGAN OF THE AMERICAN ASSOCIATION OF THE HISTORY OF MEDICINE
AND THE JOHNS HOPKINS INSTITUTE OF THE HISTORY OF MEDICINE

Editor—HENRY E. SIGERIST
Associate Editor—GENEVIEVE MILLER

VOLUME XVII APRIL, 1945 NUMBER 4

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KAPPA LAMBDA, ELF OR OGRE?

LEE D. VAN ANTWERP*

As he sat in the kitchen of Dr. Mitchell's home, young Doctor Porter wondered why there should be so much secrecy. The candle didn't give much light and its flickering shadows deepened his feeling of mystery, making him more uneasy. He could hear a confused murmur of voices in the front of the house, and the assurances he had been given by his Aesculapian confrères the past several weeks did little to dispel a feeling of vague disquiet.

His friends had told him precious little about the new society except that it had lately come to Philadelphia and that it was designed to raise the standards of the medical profession in the United States. One of the men who had approached him had hinted that it was known by Greek letters but had not said what it was. He had heard of such a name for another society several years ago when he was a medical student but hadn't known much else about it, and while he supposed it didn't make much difference what a society was called, it seemed to him as a strange source for a name.

The avowed purpose of raising medical standards was a worthy one, he was sure of that, and the members who had talked with him so guardedly were of excellent standing in the profession. He supposed he'd have to let his decision to join stand on these two meager facts and wait to see what the future brought in the way of further information.

*Editor of *The Centaur* of Alpha Kappa Kappa, on leave of absence.

Now he heard the fall of a gavel and then foot-steps approaching the kitchen. Two men entered, physicians like himself, and he was somewhat cheered to recognize physician friends of good standing, J. H. Gordon and Thomas Harris.

They said no word to him, but motioned him to his feet and placing him between them, guided him through an adjoining room into Dr. Mitchell's spacious living room where he had sat many a time discussing cases and current affairs. This room was darkened also but he was able to discern a number of men grouped into a hollow square, with here and there a familiar face.

His guides placed him in the center of the square and after they had left him, he observed that Dr. Hewson was standing before him and after a pause, spoke to him.

" Doctor, previously to either disclosing the secrets or explaining the objects of our Society, it is necessary that you be bound by a solemn oath. I am pleased to offer assurances that no pledge will be required which is incompatible with your duty to God, to your country, or to your other medical societies. If you are willing to take such an oath, you will signify your willingness by saying, ' I am willing.' "

This wasn't helping much to clear the many questions in his mind, but having come this far, he saw no route of honorable retreat and after a hesitant, " I am willing," Dr. Hewson spoke again.

" You do swear that you will endeavor to exalt the character of the Medical Profession by a life of virtue and honor, that you will keep the secrets, guard the reputations, and advance the interests of this Society and of each of its members; and that you will never encourage anyone to devote himself to the Study of Medicine whose learning, talents and honorable qualities are not such as to render him respectable in his profession, and worthy to be distinguished as a member of this Society."

He wasn't at all sure that he favored the part wherein he was swearing to guard the secrets of all of the members, but he supposed this might mean their professional secrets which was only good medical ethics. The rest seemed satisfactory and after his, " I do," Dr. Hewson continued.

" The venerable Hippocrates of Cos may be considered as the remote founder of this Society and the oath which you have just taken is, in substance, the same as was administered to its members. The influence of this Society on the morals and professional demeanor of that period is attested by the most respected authorities.

" The state of the profession in this country so imperiously calls for reformation that we have thought a Society modelled on similar principles

might do much to raise it to its legitimate standards. Knowing that we have not that rank and influence in the community to which, as members of a liberal profession, we are entitled, and believing that our present humble condition has principally resulted from the sinister conduct of some of our unworthy brethren, we have determined under a solemn sense of duty to associate on just principles for the purpose of elevating the character of our Vocation.

"The means by which this great objective is to be attained you will learn from our Constitution and By-Laws, and from conversation among your fellow members.

"That our labors may more certainly result in success, and that harmony may preside over our deliberations, it has been determined that none shall enter our association who are personally hostile to each other. The gentlemen by whom your are surrounded are all your friends—friends who too are solemnly bound to protect your reputation and to use their best endeavors to advance all your honorable views. Had they not been so, you could not have become a member of this Society, as one single negative would have excluded you from our walls.

"Doctor Porter, it is a great pleasure for me to tell you that you are now a member of the Kappa Lambda Society of Hippocrates of Philadelphia, and as president I welcome you and extend to you the hand of Fellowship. Our other members present will similarly welcome you and congratulate you on our mutual connection, after which you may seat yourself among us and I will inform you concerning the secrets of our Society."

There could be no doubt concerning the warmth of the handclasp or the sincerity of the words as he was passed from member to member to receive their congratulations, and as each unknown physician told his name, he was more and more impressed. Here was Charles D. Meigs, known internationally in his field of obstetrics and gynecological surgery, Samuel Brown, Professor of Medicine at Transylvania University, a name well known in Philadelphia medical circles. Such men were good to be associated with and he congratulated himself for the first time.

After a few minutes he was offered a chair and as the room became quiet, Dr. Hewson spoke again.

"This Institution is distinguished by the name of the Kappa Lambda Society of Hippocrates and was first established at Lexington in the year 1820, by Professor Brown of the Transylvania University. The Greek letter Kappa is the initial of the word **Κρυσταλλος** or crystal. A cube being one of the primitive forms of crystallization, and capable of uniting

in regular figures, is adopted by this Society as its emblem, expressive at once of the purity and primitiveness of its principles and the harmonious combination of its members.

" No particular signification is given to the letter Lambda, in order the more effectually to conceal the objects of the Society, and to lead astray the uninitiated in their conjectures. The badge worn by our members is a square on which are inscribed ' Virtue, Science, Friendship, and Harmony.' We have adopted as a means by which to make ourselves known to each other, a sign and a signal word, which consists of crossing the fore and middle fingers of each hand forming a square, and using at the same time the word ' primitive ' in some appropriate phrase. Our motto is: Non doctior, sed meliori imbutus doctrina.

" It is the intention of the Society, at some future period, to establish a code of rules and regulations for the Government of its members. For the present however, we have adopted such parts of the Medical Ethics of the illustrious Doctor Percival, as are adapted to the state of the profession in this country."

* * *

Thus, in the summer of 1822, did a physician become a member of Kappa Lambda, the first professional Greek letter society of which we have knowledge. Two reports of the affairs of this society have been published in modern times, one by Dr. Chauncey Leake [1] in 1922, the other by Dr. Benjamin H. Frayser [2] in 1935. Both are informative but neither brings out the details of organization and ritual which are of interest to students of American medical history and which might seem to justify still another report. The information for the present article has as its principal source, the original records of the Philadelphia society or branch, which are deposited with the Philadelphia College of Physicians. For permission to study these records the author makes grateful acknowledgment of his indebtedness to Mr. W. B. McDaniel, 2nd, Librarian of the College. The above ritual is taken verbatim from these records. Other sources have been reviewed as thoroughly as possible and all correlated in an attempt to arrive at unbiased conclusions.

The meager literature of the days when Kappa Lambda was active, consists almost entirely of the findings of a committee appointed by the Medical Society of the City and County of New York and of comments in the public press of that period. This source of information is characterized by a definite tone of vitriolic adverse criticism and therefore must be read and judged in that light. There is probably some basis in fact in

the contention that the New York branch of the Society used the secrecy of the organization for the mutual profit of the members, but considering the Society as a whole, there is little or no evidence that it was the hydraheaded monster sometimes pictured.

A factor which unquestionably played a most important part in the public judgment of Kappa Lambda and which might be easily overlooked,

Fig. 1. The original records of the Philadelphia society showing the box in which they were kept with its huge lock.

was the nation-wide rejection of *all* secret societies following the disappearance of William Morgan in 1829 and the charging of his disappearance to the Masonic Order. The popular belief that he had been murdered by Masons of northern New York because of his threat to reveal the secrets of Masonry, resulted in the strongest feeling against all ritualistic fraternities of the day, even resulting in the formation of a short-lived Anti-Masonic political party.

Frayser [2] suggests the possibility that Kappa Lambda originated prior to 1820, but the ritual states definitely that the Society was " first estab-

lished at Lexington in the year 1820," [3] and it is altogether unlikely that the date is incorrect as the minutes of the Philadelphia society show the presence of Dr. Brown, Founder of the Society, at their meetings on many occasions, and such a glaring error appearing in so prominent a place as in the ritual itself, would have resulted in correction. The incomplete minutes which Frayser finds in the library of Transylvania University [2] are the basis for his contention that Kappa Lambda originated prior to 1820, but it is the present writer's belief that they represent a student society unrelated to the present subject. These minutes do not mention the name of the society but " the letter ' K ' is noted, and many Lambdas are to be found listed on one page." [2] It is a reasonable explanation that Dr. Brown, noting the successful functioning of a fraternity among students at his school, and seeing possibilities in the application of the fraternity principle in an attempt to correct certain problems existing in the medical practice of his day, applied the principle with the resultant birth of Kappa Lambda.

Nothing approaching the completeness of the Philadelphia records has come to light concerning any other Kappa Lambda chapter or " society," as their chapters were called. The mother chapter, at Transylvania University in Lexington, Kentucky was established in 1820 through the efforts of Dr. Samuel Brown, Professor of Medicine at that college.

As originally visualized by the founders, Kappa Lambda was to be a fraternity of graduate physicians and accredited medical students sworn to the deepest secrecy. It is the writer's belief, however, that few if any, students were admitted to membership. No member was permitted to divulge the name, objects, members, or officers of the society, or even to acknowledge the fact that such a fraternity existed. It was designed to raise the standards of the medical profession, and there is little or no reason to question the sincerity of the founders in this object since only cursory examination of medical practice of the day will convince the most doubting that much change was needed.

Little is known then, of the life and success of the Lexington chapter except that it flourished for at least six years and that at least 127 members were initiated there as evidenced by the list in the Philadelphia membership book. This list does not purport to be complete and it may very well be that there were many more. Our real story begins on June 7, 1822 when " at a meeting of several physicians of Philadelphia, initiated by Dr. Samuel Brown, as members of the Kappa Lambda Society of Hippocrates, an association lately instituted in Lexington, Ky., for the purpose of raising the medical profession in public estimation and conferring

mutual benefits, and designed to extend to all parts of the United States, the following gentlemen were present: Drs. Samuel Jackson, Thomas T. Hewson, Thomas Harris, Charles D. Meigs, J. H. Gordon, Hugh L.

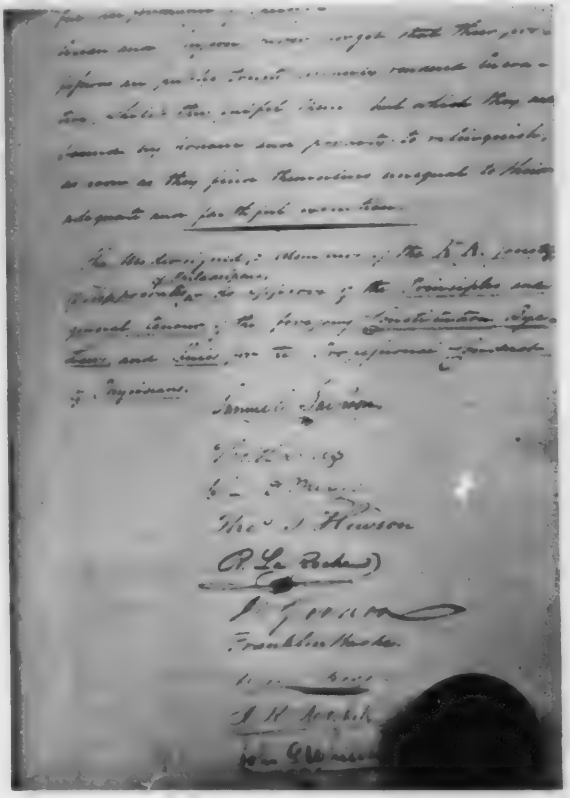

Fig. 2. Signatures of the original Philadelphia members below the society's constitution.

Hodge, and Franklin Bache."[3] This is the opening minute of the Philadelphia society and these men with Dr. René La Roche were the founders of that society.

At the second meeting (June 28, 1822) "bye-laws" were adopted which were to govern the acts of the local society, the constitution of the Lexington society having been adopted at the original meeting. Under the constitution of Kappa Lambda, membership requirements defined that

Fig. 3. The brass seal of the Society. Central letters represent Kappa Lambda Society of Philadelphia.

Fig. 4. Wax impression of the seal.

a candidate must have reached "the age of discretion," have attended or be in attendance, at some reputable school of medicine, or have been in practice at least four years. He must "have unimpeachible moral integrity, be of temperate habits, and have the general deportment of a gentleman." In addition, none might be admitted to membership "who is only taught in one branch of the profession." [2]

The badge of the society as described in the ritual above was to "be printed on white and worn at all our public processions." [3] There is no evidence that such badges were ever made as no mention of them, bills for them, or the badges themselves are found among the rather complete Philadelphia records. Perhaps there was no need for them since the secrecy surrounding the organization precluded the possibility of "public processions."

As regards the mechanics of expansion, only the mother chapter was empowered to issue charter grants for subordinate societies and such charters were issued as indicated in Article VII of the constitution. "All members leaving Lexington may, on application, receive a certificate of membership in the form of a charter authorizing him to establish a society at his place of residence." [4] This method of expansion soon met with objection by the enthusiastic Philadelphia members and on Nov. 13, 1822 a report was presented to the Philadelphia chapter recommending that the mother society be petitioned to amend this part of the laws of the fraternity. Accordingly on Dec. 11, 1822 the constitution was amended to set up a Grand Kappa Lambda Society in "each of the United States *and in other governments.*" [5] From this clause of the constitution, certainly none can properly accuse the fraternity of being lacking in ambition.

The by-laws of the Philadelphia society adopted "for its internal government," specified that "no member is permitted to intimate the existence of this society to any person until after he is proposed, ballotted for, and elected." [6] The initiation fee was set at five dollars and shortly thereafter the annual dues at two dollars. The by-laws are concerned considerably with the handling of recalcitrant members and provide that an accused member be notified, the society to consider, and that a two-thirds vote be required to convict. Disagreements between members were to be settled by a committee of three appointed by the president. Once conviction was obtained, however, the penalty was to be heavy as Article X witnesses: "Every physician dismissed from the society for improper conduct must be made to feel his degradation. For this purpose the members are forbidden to associate or consult with such persons so dismissed, on pain of such punishment as the society may think proper to inflict." [7]

In all fairness it must be said that there is little or no evidence of conflict among the members until the structure of the society began to crumble. When that time came, there was too much general feeling among too many of the members for a satisfactory application of the above provisions.

Following the establishment of the chapter or "society," its progress is best revealed by significant extracts from the minutes and other records and the reader is now invited along this interesting path through Kappa Lambda's history. Parenthetical notes are the writer's.

October 9, 1822. Dr. Brown is present; Dr. J. H. Gordon, Treasurer, resigned due to leaving the city. "On motion it was resolved that authority be granted Dr. Gordon to institute Kappa Lambda societies in the Medical Department of the Navy and in such other places as he may think proper." (This authority was unconstitutional at this time and may have been the factor prompting the request for the mother chapter to change the methods of expansion.) A room at the northeast corner of Spruce and Sixth Streets was rented. (Meetings had been held prior to this time at the home of Dr. John K. Mitchell, 122 South Eighth Street.)

November 27, 1822. Dr. Thomas T. Hewson was elected president. (The annual meetings were held in November and no mention of a president is made covering the period from the organization of the chapter to this time. Dr. Hewson was an out-standing physician of Philadelphia and was president of the Philadelphia College of Physicians of Philadelphia from 1835 to 1848. He was repeatedly reelected president of the Philadelphia society of Kappa Lambda and served as such through most of its existence.)

January 8, 1823. Reference is made in the minutes to "the societies about to be established in New York, Baltimore and Washington City."

May 28, 1823. Dr. Norris reports the Washington City society "to be thriving" and "that of Baltimore then going into operation."

July 2, 1823. "Dr. Atkins reported . . . he had, during his late journey, extended the principles of the Kappa Lambda institution to Boston by initiating Drs. Channing and Hale." (He expected a society would shortly be organized but none ever developed.)

March 24, 1824. Consideration given to the calling of a general meeting of physicians for the purpose of proposing the adoption of Kappa Lambda's standard scale of medical fees but the plan was indefinitely postponed. (The use of a scale of standard fees was required by Article XXI of the constitution and the fact that such a scale was expected of the members might unwarrantedly foster unfavorable opinion of the society by the reader. Actually it was so flexible as to work a hardship on none;

e. g., " for a single visit and advice in a case, from 1 to 10 dollars; for a case of midwifery, from 8 to 20 dollars; for passing the catheter, from 1 to 5 dollars.")

November 10, 1824. " Dr. Patrick Macaulay, a member of the Kappa Lambda Institute from Baltimore, was introduced by Dr. Norris and received in due form."

November 17, 1824. Dr. Samuel Brown on a visit to the chapter, told of initiating Dr. Carswell of Edinburgh who " with zeal embraced the principles of the Institution."

December 27, 1824. Plans are nearly completed for the Philadelphia society to edit and publish the *North American Medical and Surgical Journal* and the " secretary was directed to transmit copies of the plans to the Kappa Lambda societies of New York, Lexington and Washington." (It will be noted that the society of Baltimore is not mentioned and it is assumed that it had already gone out of existence. The *North American Medical and Surgical Journal* was edited by members of the society from 1826 to 1832 and published by the Society from 1826 to 1830 when it was sold to James Kay, Jr., & Co., who had printed the journal for the society. The *Journal* itself must be considered to compare very favorably with contemporary medical publications and its publication is excellent evidence of the Philadelphia society's serious purpose.)

March 23, 1825. " Dr. Atkins of Luzerne County, Pennsylvania, was authorized to establish there a local Kappa Lambda Society." " On motion Dr. La Roche was authorized to establish state Kappa Lambda societies in such states of the union as do not already possess Kappa Lambda Institutions."

November 9, 1825. A library for the society is first proposed. " Dr. William Waring of Savannah was authorized to institute a Kappa Lambda Society in Georgia."

December 28, 1825. It is ordered that a Society seal be designed and made. (This seal is a part of the material examined by the writer and is shown in Figure 3. A wax impression made by the writer is shown in Figure 4.)

January 26, 1826. The Society moved " the purchase of a cheap bookcase and members . . . invited to present such books of a medical or scientific nature as may be convenient to themselves."

August 8, 1826. " Resolved that the Secretary be instructed to write to the Secretary of the Lexington Kappa Lambda Society and inform him of the inconvenience to which we have been subjected by the indiscretion of some members of that Society, and to request information whether

secrecy was still enjoined upon the members." (Here begins the trend which ends by the lifting of the bond of secrecy as to the society's existence. In addition it may be argued reasonably that the society's greatest bond between members lay in this secrecy and therefore this incident marks the beginning of a trend ending in the society's demise.)

December 27, 1826. "Dr. (F. S.) Beattie informed the Society that he had requested of the Guardians an investigation of his conduct in relation to his difficulties with the professors of the Medical Department of Jefferson Medical College." (This dispute ended in a libel suit brought by Dr. George McClellan against Dr. Beattie. The issues are not important to the present writing; only the fact that in the testimony, one of the witnesses testified that a secret medical association existed in Philadelphia and that the members bound themselves to mutual aid and support. This brought to the public attention the existence of the Society and eventually the revelation that a similar society existed in New York City. Further details are to be found in the discussion of the New York chapter of the fraternity.)

March 28, 1827. It was moved to permit resignation from the society by individual members but such members were considered still bound by the obligation of secrecy.

July 11, 1827. Secrecy as to the name and existence of the society was removed from the members' obligation to take effect September 1, 1827, and Lexington and New York to be notified of the action.

September 12, 1827. The Secretary was instructed "to answer the letter received from the New York Kappa Lambda Society and to inform them that the society had determined to acknowledge its existence but that in doing so, it would not compromise them."

October 1, 1827. The following rules were adopted regarding secrecy: A member might reveal his membership in the society, his fellow members' names, acknowledge Percival's Code as the code of the society,* announce the society's connection with the *North American Medical and Surgical Journal*, and refer to the scale of medical fees as a requirement of the society to which he was bound to adhere. But he must still keep secret the constitution and by-laws, the officers, the matters of government, and the ritual.

* In 1821 the Society in Lexington had published a 15 page pamphlet *Extracts from the Medical Ethics . . . by Thomas Percival*, Lexington: Printed by T. Smith, which was republished in Philadelphia in 1823. In the Welch Library copy of the 1821 pamphlet the name of the Society, place of publication, and the printer's name have been carefully cut out by some previous owner.

November 28, 1827. The annual meeting with only ten members present. (Attendance is now low and steadily falling off.)

May 14, 1828. Moved to " rent the room occupied by the College of Physicians " for fifty dollars a year.

February 10, 1830. The death of Dr. Samuel Brown, who had died the previous January 12th, was announced. A motion was introduced to remove all injunction of secrecy from the ritual but failed to pass.

June 8, 1830. It was resolved that " the oath hitherto administered to new members be done away with, and that in the place of it, a suitable form of address be prepared, in which the duties of a member of the medical profession shall be plainly inculcated."

January 12, 1831. The annual meeting with but six present. (Apparently there is not enough interest to hold the annual meeting in the month of November as required.)

July 13, 1831. Resolved to meet but once monthly instead of bi-monthly as previously.

August 10, 1831. A committee is appointed to obtain a reduction in rent. (This is but one of many evidences of weakness; there are usually but five or six present at the meetings, resignations are increasing, and many minutes show only a laconic " no quorum.")

February 8, 1832. Annual meeting with but nine present.

May 9, 1832. The address referred to in the minutes of June 8, 1830 is finally adopted though the oath for which it was to be a substitute was not used since the motion for the substitution. The address is as follows:

" Doctor . . . , it is my duty as Presiding officer on the present occasion, to announce to you that you have been elected a member of the Kappa Lambda Society. The law of our body which required unanimity in election gives you a pledge of favorable disposition of those who now surround you. The friendly offices of your fellow members are assured you in every honorable undertaking, while by the act of your entrance among us, you bind yourself with reciprocal good feeling to afford the like assistance.

" The objects of our common efforts, thus guided by mutual counsel, and invigorated by mutual support, are to establish the practice of medicine on the basis of true philosophy, and to make its ethics conform to the rights of physicians individually, the dignity of the profession, and the claims of suffering humanity.

" The Society therefore expects that you will sedulously contribute toward the fulfillment of these high purposes, and add thereby to the character of our profession, as well as to your own prosperity and fame."

From December 12, 1832 to February 5, 1835 there are no minutes

to be found in the minute book. It is the author's belief that no meetings were held during this period rather than that the meetings were not recorded. This contention is supported by the fact that there are likewise no entries in a carefully kept ledger except two in the year 1834, one for the sale of a stove and one for the sale of chairs. Similarly in the record of scientific meetings which were kept in a separate book there are no entries after June 22, 1831. The minutes of this last scientific meeting are as follows: "Minutes of the last meeting read and adopted. No written communication was offered and after some desultory conversation and a short session, on motion adjourned."

February 5, 1835. Meeting called "for the purpose of settling and closing the concerns of the institution." The Treasurer is directed to turn over the balance of his funds ($111.71) "in aid of the liquidation of the debts incurred in conducting the North American Medical & Surgical Journal, up to the period of its transfer by sale to Messrs. J. Kay, Jr., & Co." It was resolved to turn the society records over to the College of Physicians of Philadelphia. (These records were received by the College August 2, 1836.)

February 18, 1835. "Resolved that from and after the termination of this meeting, the Kappa Lambda Society of Philadelphia shall be held to be dissolved." "On motion adjourned sine die."

And so the curtain falls on the Philadelphia Society of Kappa Lambda. As much as is known of the other societies remains to be discussed but no records have come to light offering any accurate or detailed information. Such knowledge as we have of them is gleaned from the Philadelphia records, a hostile New York public press, a few notes taken from the minutes of the Medical Society of the County and State of New York, and a printed booklet detailing the history of the Rutgers Medical Faculty.

As regards actual facts concerning the mother chapter of Kappa Lambda at Transylvania in Lexington, very little is known. Frayser [2] quotes briefly from the minutes of the unidentified fraternity mentioned above. The present writer does not believe that this organization had any actual connection with Kappa Lambda and since no minutes dated during the known life of Kappa Lambda are quoted by Frayser, we must conclude that none exist at Transylvania and none from any other source have thus far come to light. We must therefore rely on references and inferences based on the Philadelphia records for such information as we have.

It is certain that the fraternity was founded at Transylvania in 1820 and that Dr. Samuel Brown, Professor of the Theory and Practice of Medicine was the originator of the idea for its formation. We know also that there were initiated at least 127 members in Lexington as shown

by a printed list of members dated December 11, 1822 and found in the Philadelphia records. Since this date is but two years after the founding of the society, it may be assumed that more than this number became members.

The reasons for the demise of this chapter are unknown as well as the date thereof. Some slight evidence of failing enthusiasm is reflected by embarrassment of the Philadelphia members caused by violations of the oath of secrecy by Lexington members. This is broadly hinted in the Philadelphia minutes of August 8, 1826 reported in full above. The last mention of the Lexington society in the Philadelphia minutes is under date of July 11, 1827 and it is possible that it passed from existence shortly thereafter.

But little more is known of the Baltimore society or chapter. There are no records in the way of communications, printed publications or documents of any kind from Baltimore in the Philadelphia records. The first reference in the Philadelphia minutes is under date of January 8, 1823 where reference is made that such a society is "about to be established." At the Philadelphia meeting of November 10, 1824, a Baltimore member was introduced and "received in due form," but when plans for the *North American Medical and Surgical Journal* were sent from Philadelphia to the chapters in December of the same year, none was sent to Baltimore and it must be assumed that the chapter no longer functioned as such.

As regards the Washington chapter there is only slightly more information, but such references as are left to us indicate that it was somewhat longer lived. The first definite mention is found in the report of a committee dated Jan. 22, 1823 that Dr. Norris (then Vice-president of the Philadelphia chapter), had taken to Washington on the 31st of December 1822, a copy of the constitution of the general society, a copy of the by-laws of the Philadelphia society, a copy of extracts of Percival's Code of Medical Ethics, a "copy of the Formula observed at Initiations," and a copy of "explanations made to the initiated member."[8] The committee further reported that they "believe that Dr. (Joseph N.) Lovell will find no difficulty in organizing a branch of the General Kappa Lambda Institution at the place of his residence" (Washington). Under date of May 28, 1823 the minutes show that Dr. Norris reported the Washington City branch "to be thriving." A letter from the Washington society dated May 15, 1825 concerning the proposed *North American Medical and Surgical Journal* enclosed a list of members, twelve in number, of which Dr. Edward Cutbush was president, Joseph N. Lovell, vice-president, and Henry Huntt, secretary. The last reference to this chapter is to be found in a letter from Dr. Henry Huntt dated July 11, 1825, "At a stated

meeting of the Kappa Lambda Society of the District of Columbia," discussing plans for the proposed Journal.[8] We are permitted no further glimpses of this branch of the fraternity and it, also, passes into obscurity.

Regarding the New York City chapter we are offered less fleeting and more brilliant glances, as though seen by the aid of lightning flashes. Such information as we are allowed is more provocative than that associated with other chapters since the fraternity members in that city became involved in medical society politics but many questions arise to which we are denied the answers even in the minutes of the medical society in question. Probably there is little doubt but that the history of the New York group is not particularly savory and if all of the allegations are true, its activities were most unethical and deserving of the severest criticism. The evidence against them is particularly damning but the reader must remember that it is gathered from unfriendly sources. The fraternity itself, never, at any time, offered any rebuttal to the claims made against them except one which is patently false. Perhaps this failure to defend itself is proof of its guilt. The evidence is presented to the reader who must decide for himself.

The date of establishing the chapter is definitely known, the date of its demise is shrouded in mystery. In the Philadelphia archives is a letter dated October 8, 1823, addressed to the Secretary: "Sir—I have the honor to inform you, and through you, the Kappa Lambda Society of Philadelphia, that a similar institution was organized in this city on the 29th ult. which is denominated the New York Kappa Lambda Society of Hippocrates." The following names are appended as the founding members of the chapter: Alex H. Stevens, President; Gilbert Smith, Vice-president; Peter C. Tappen, Secretary; Ansel W. Ives, Corresponding Secretary; Thos. Cock, Treasurer; James C. Bliss, Joseph M. Smith and Jon. Watts, Jnr., Guardians; Samuel W. Moore and Nicoll H. Dering, members.

Until 1829 the affairs of the chapter remain hidden except for regular and uninformative notations in the minutes of the Philadelphia society. In that year Dr. George McClellan, founder of Jefferson Medical School, brought suit against Dr. Francis S. Beattie for a libel, as previously mentioned. In this suit one of the witnesses (Dr. Benjamin A. Coates) stated on the stand that a secret medical society existed in the city of Philadelphia and that the members were bound to give mutual aid and support. This information attracted the attention of the editor of the *New York Medical and Physical Journal* and in his October 1829 issue he reported the trial and devoted three pages to castigating any physician who would ally himself with others in forming a secret association. His

information was actually limited to the above bare facts but his imagination was agile, his indignation and vocabulary unbounded, and he expressed " a sincere opinion that the medical atmosphere of New York is untainted by the exhalations of any branch from such a parent stem." [4]

This article was answered in the January 1830 issue of the *North American Medical and Surgical Journal* which, it will be remembered, was owned and edited by the Philadelphia Kappa Lambda Society. In his reply the editor does not admit that a chapter exists in New York but calls to the attention of the New York editor the bad state of New York medical politics, reminds him that Philadelphia politics are essentially nonexistent, and infers that Kappa Lambda of Philadelphia is responsible for this salutary state of affairs.

The cudgel was then taken up by the editor of *The American Lancet* who published on Oct. 13, 1830, a communication signed 'Medicus' (who was Dr. John Stearns, a non-member of Kappa Lambda). This communication contained a list of 17 New York physicians stated to be members of the fraternity. Unfortunately it contained the names of two physicians who were *not* members and they felt themselves injured to the point of bringing suit for libel against the *Lancet* and its editor. No conviction was obtained in this suit but feeling ran so high against the journal that it was shortly forced to suspend publication.

In January, 1831, there was published [4] a letter dated the 19th of that month, signed by thirteen of the physicians claimed by " Medicus " to be members of the New York Kappa Lambda. They stated that " the statements contained under the signature of Medicus . . . representing the existence of an association of medical men in this city, formed for purposes dishonorable to themselves and injurious to the profession, are totally without foundation." Doctor Stearns, being persuaded that he had been in error, published a retraction of his allegations concerning the objects of the organization—" I with pleasure acknowledge that I have hitherto entertained an erroneous belief of the objects of the Association, and regret the effects of the unfavorable opinion I have expressed on that subject." [4]

It will be noted that Doctor Stearns does not retract the statement of the existence of the society, only that concerning its objects. By this time, most of the physicians in the city were convinced of its existence but the standing of the men alleged to be members was so impressive that their denial was weighty indeed. Among the men listed by Medicus in the first *American Lancet* communication was the president of the College of Physicians and Surgeons and four professors of the same school. Small wonder then, that the non-members were willing to think themselves

mistaken, or at least wait for the time when their proof should be conclusive.

But the disavowal "was far from satisfying the profession at large, and, consequently, the (Medical) Society very properly determined upon a formal investigation."[4] Accordingly, on June 30, 1831 a special meeting of the Medical Society was called and a committee of four physicians was appointed to investigate "the subject of the secret association of medical men in this city for purposes said to be derogatory to the profession, and injurious to the public."[5] None of the committee members is known to be a member of Kappa Lambda although at least six of the members attending the meeting were, as was also the secretary of the medical society!

The report of this committee was returned, approved, and ordered published at a meeting held the next month and today this publication is one of the rare documents concerning the fraternity. Regarding the investigation, the committee reported meeting with small cooperation from any member of the fraternity and no reliable information was obtained from its members. It consists of ten printed pages and actually contains very little which is represented as factual information of the fraternity, its members, objects, organization, etc., excepting a list of the members and what purports to be the pledge taken on initiation. Its nature is more in the style of a formal essay discussing the vicious nature of secret clubs with ramifications into the subject of medical ethics.[6]

The pledge detailed in the report of the committee differs considerably from the one actually used in the ritual and since it is reported by hostile minds without proof of authenticity, it must be considered inaccurate. This is the obligation reported by Frayser[2] but because of its source, it cannot be accepted as authentic. There is no reason to suspect that the ritual used in New York was different in any respect from that known to have been used in Philadelphia but granting that it *is* accurate, the present writer fails to find much evidence of vicious content. It is reported here so that the reader may judge for himself. "I . . . do solemnly promise, that by all proper means, I will promote the professional respectability and welfare of the members of this association, and vindicate their characters when unjustly assailed, and that I will not demand any pecuniary acknowledgment for such instruction as it may be convenient for me to afford to the son of any indigent member, as may be in the opinion of the society qualified by his previous education, and talents and moral character, to become a respectful and useful member of the profession, but that I will afford such instruction gratuitously, in conjunction with the members of this society."

The one pithy section of the committee's report is that dealing with identity of the members of Kappa Lambda among the city's professional offices. It is such undeniable evidence of an attempt to accumulate these offices to themselves that it is quoted here at considerable length.

" Almost all the professional offices in the city of New York, leading to practice and conferring reputation are monopolized by the Secret Association. In the N. Y. Hospital, the attending physicians and surgeons are Drs. Thomas Cock, John C. Cheeseman, Francis U. Johnson, Alexander H. Stevens, John K. Rodgers, J. M. Smith, and Valentine Mott. Dr. Mott was appointed a surgeon of the Hospital before the formation of the Secret Club, of which we are happy to state he is not a member. In the N. Y. City Dispensary, we have as consulting physicians, Drs. John C. Cheeseman, Francis U. Johnson, Alexander H. Stevens, S. W. Moore, and John A. Smith. This last gentlemen we have been told was formerly a member of the Secret Association, but has lately retired from it.

" The physicians of the Lying in Establishment are with two exceptions members of the N. Y. Kappa Lambda. . . . One of the physicians of the Magdalen Asylum (Stephen Brown), is a member of the Secret Club. He has also within a few years past enjoyed the important situations of physician to the Alms House, and attending physician to the N. Y. Hospital. In the Medical College in Barclay Street (the College of Physicians and Surgeons) before the demise of the late President, at one time the Secret Club had in possession four professorships and the presidency of the institution. Of the medical trustees two-thirds are members of the Secret Association." [6]

The next notation in the minutes of the Medical Society for the City and County of New York is found under date of October 22, 1831 when, at a special meeting, the following resolution was " laid over, to be acted upon if necessary at some future meeting ": " Resolved, That the Medical Society of the City and County of New York view the secret medical Kappa Lambda Society of this city as attempting to evade the Code of Medical Ethics, and do give it their decided and unqualified censure, considering all members of this Society combining in any such association as unworthy of the protection of our excellent Code of Ethics." In the light of the allegedly high feeling against Kappa Lambda, it is difficult to understand why this motion failed of passage since but four of the 49 members present were members of Kappa Lambda. It may be that the physicians present thought public opinion not yet ready for such action (though such a thought is unreasonable), as the following action was adopted at the same meeting: " Dr. Milledoler, from the Committee on the subject of

the Secret Medical Society, read a full and detailed expose of the causes that led the Medical Society to investigate the subject of the existence and tendency of that association, which . . . was ordered to be published, together with the report, in one or more of the daily papers." [5]

Very shortly, at a subsequent meeting, the Medical Society passed the following strenuous resolution: "Whereas, it appears from authentic documents that Drs. . . . (here follow the names of 29 physicians) are members of a society called Kappa Lambda, which imposes on its members obligations of secrecy, and required them to assist each other in their professional practice, and to defend and sustain their respective characters, although it may be prejudicial to the characters of other individuals, and in direct opposition to the honor and interest of the profession; and

"Whereas, their professional conduct has for some years past been highly dishonorable in its character, derogatory to the profession, in direct violation of our excellent Code of Ethics, and in many instances oppressive and injurious to the community, and although a statement of these facts have been repeatedly published by the Medical Society, they have never attempted to refute it, but still persist in their disgraceful and unprofessional course of practice under the banners of their Secret Society; therefore

"Resolved, That the above named physicians, and all others who are members of said Kappa Lambda Society, shall be considered as excluded from the protection of the Code of Ethics of this Society, and from consultations with its members.

"Resolved, that if they do not on or before the second Monday in January next, 1832, publish a dissolution of the Kappa Lambda Society, and give to the Medical Society a satisfactory pledge that they will no longer continue to associate under a sanction so dishonorable to the profession, that a legal prosecution will be instituted against them pursuant to . . . the Revised Statutes."

This is indeed strong action, and yet Kappa Lambda never published a dissolution or any other retraction, no legal action was taken against them, and careful examination of the minutes of the Medical Society fails to reveal not only any further criticism on the above dead-line but any mention of Kappa Lambda whatever at that time!

Now the affairs of Kappa Lambda in New York sink again beneath the surface but there can be no doubt of the continued activity of the fraternity in spite of a lack of documentary evidence. It is apparent that one of the prime activities of the group was the continued election of its members to the offices of the Medical Society. This became more and more objectionable to non-members until 1838 when a concerted move to

remove the Kappa Lambda influence from the Medical Society once again brings evidence to the surface.

In that year non-member physicians became so incensed that they determined to fight fire with fire and a number of them adopted a report "at a meeting of medical gentlemen, held at the grand jury room on the 2d of July, 1838." [6] At that meeting the physicians attending organized into a closed group of their own for the purpose of defeating the Kappa Lambda slate of officers presented at the annual meeting of the Medical Society. However Kappa Lambda emerged triumphant at the elections, due perhaps, to the fact that the intended secret combination against them leaked out just prior to the election. This resulted not only in a concerted effort on the part of Kappa Lambda's members, but also a certain failing of interest on the part of physicians who were members of neither group and who questioned, "if one evil exists, is it more wise and noble to destroy that evil, or to counterbalance it by another of equal magnitude? In short, because we have Kappa Lambda the First, must we also have Kappa Lambda the Second?" [4]

There remains but the consideration of the claim of interference with teaching methods by Kappa Lambda at the College of Physicians and Surgeons in New York. Both Leake [1] and Frayser [2] have reported this affair and the present writer believes they are essentially correct in their statements. Through the courtesy of Mr. George A. Osborn, Librarian of the Rutgers University Library, we are able to study the short and interesting story of the Rutgers Medical Faculty.

Rutgers granted medical degrees during three periods of her history, only the last of which concerns Kappa Lambda. In none of the three periods was there any teaching of medical subjects at the college in New Brunswick, New Jersey. The teaching was carried on in New York City and on recommendation of the teachers to the Trustees of the College, the latter granted the degrees following an additional examination.

The first period covered the years 1792-93 when six M. D. degrees and Three M. B.s were granted to students and six honorary M. D.s were granted to practicing physicians. During this period there was no formal Faculty of Medicine, but the recommendations were made by special arrangement principally with Doctor Nicholas Romayne of New York City.

On December 14, 1811, Archibald Bruce, Nicholas Romayne, John Watts, Jr., Richard Bayard, Johnathan Griscom, Thomas Cock, and Valentine Seaman petitioned the Rutgers Trustees for "an academic connection as may best tend to encourage the interests of science and favor the diffusion of Knowledge." [7] As the result, the Trustees resolved

that the above six physicians " shall be constituted and they are hereby constituted and declared to be the Faculty of Medicine." [7] Under this arrangement which covers the five years beginning in 1812, twenty-one M. D. degrees were granted to students. The agreement with the medical professors was terminated in 1816 by the Trustees who " finding their funds altogether insufficient for the support of their institution, resolved to suspend the exercises, and as a necessary consequence of their determination they declared it inexpedient thereafter to confer medical degrees." [7]

The third period of activity resulted from a petition dated September 12, 1826 and signed by David Hosack, Samuel L. Mitchell, William J. McNevin, Valentine Mott, and John W. Francis, who " were for several years Professors of Medicine and Surgery in the College of Physicians and Surgeons in New York. We beg leave to acquaint you that we have lately resigned these situations, and that being unwilling to abandon the useful occupation in which we have labored so long, we immediately after organized another medical college in which, as we hope, former evils will be avoided." [7] " While seeking the patronage of an established scientific body that would confer the accustomed academic honors on such of our candidates as proved themselves worthy upon an examination, we turned our eyes to the rising reputation and increasing stability of your college, and earnestly desire to form a connection with it that shall prove advantageous and honorable to both." [7]

The history of the Rutgers Medical Faculty states that the above petition resulted from difficulties between the faculty and the Trustees of the College of Physicians and Surgeons. " There were complaints and replies, charges and countercharges, committees of investigation, hearing before the Board of Regents and appeals to the Legislature. This state of things culminated in 1826 in the withdrawal of all of the professors . . . and the appointment of others in their stead." [7] The writer has no list of the Trustees of the College at hand in order that they might be checked against the list of known members of Kappa Lambda but the above five petitioners are not only known to be non-members but were leaders in the opposition to the influences of Kappa Lambda. Further they are generally acknowledged to have been outstanding in their abilities as teachers of medicine in their time. Consequently we are very willing to believe that Kappa Lambda members had extended their influence among the trustees of the medical college and they had forced the resignation of the faculty in an attempt to gain control of yet another medical activity in New York City. Further evidence of this interpretation is found in a letter from Dr. Hosack stating that the Board of Regents approved " the conduct of

the professors," "that they disapproved of the conduct of the Trustees," and that they had intended removing the entire Board of Trustees but found that they had no such legal authority under the charter of the college. As the result of this impasse, the faculty resigned in a body and petitioned Rutgers as above.[6]

At a meeting of the Trustees of Rutgers held in October, 1826, the petitioners were "constituted and declared to be the Medical Faculty of Rutgers College."[7] This convenient arrangement started most auspiciously and in 1827 twenty-seven students were granted M. D. degrees by Rutgers as well as nine honorary M. D.s to practicing physicians. This arrangement was short-lived, however, as "the enemies of this new medical college were not idle and they were very influential. They promptly procured the passage" of an act "by the Legislature of New York in 1827" which stated that "no diploma granted by any authority out of this State to an individual who shall have pursued his studies within this State . . . shall confer on such individual the right of practicing physic or surgery within this State."[7]

The history of Columbia College as quoted in the Rutgers history states "that the Faculty abandoned the contest and the school ceased to exist." Rutgers granted five honorary M. D. degrees and two to students between 1830 and 1835 but it seems unlikely that they were recommended by their Medical Faculty under the arrangement of 1826.

Thus ends the documented story of Kappa Lambda. We are left entirely uninformed as to the length of its life in New York. Leake states that they sent a delegate to the National Medical Association in Washington City in 1858[1] but the writer is unable to verify his authority and is inclined to believe him in error. So strong was the opposition to Kappa Lambda by 1838 that it is unlikely that it was able to maintain its power for very long after that time. It is most likely that it gradually lost power and died of inanition as did the Philadelphia chapter a few years earlier.

The writer has accumulated a list of forty New York physicians who at one time or another, were members of Kappa Lambda. A study of the lives of these men would afford a valuable and interesting commentary on contemporary medical affairs but such is not the purpose of this occasion. Some of their names awaken associations intimately tied up with American history both medical and political, two deserve passing comment. Included in the list is Marinus Willett who could not have been the man who served Aaron Burr as a second in his duel with Hamilton[8]—he died in 1830, but he is known to have had a son of the same name and who it might appear inherited a tendency toward liberal

thinking. Another was Jared Linsly who attended Commodore Cornelius Vanderbilt when he received his nearly fatal injury in 1833.[9]

John Watts, Jr., Edward Delafield, Thomas Cock, Alexander Stevens—these men were not the "have-nots" looking hungrily at the "haves"; they were men of recognized standing and ability. What forces moved them to depart the usual ethical paths? Did an as-yet-undiscovered end seem to justify the means? Did conditions exist which prompted them to proceed as they did and which is lost to us now? These questions remain unanswered for the present but might well be seriously considered by a future student.

In closing the page on Kappa Lambda the writer must summarize enough to say that he believes the fraternity was established for a serious and justified purpose—that of attempting the correction of certain professional ills of the day; whether an unfortunate method was chosen is a matter for conjecture. Further it is the writer's opinion that Kappa Lambda was not mis-used except in New York City. It appears certain that neither the founders nor the members of any other chapter used the afforded secrecy for personal gain; that it was so used in New York seems certainly to have been a misdirection of its possibilities by men who would have found some other medium for gaining their ends had they been denied this attractive and effective medium.

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NOTES ON THE HISTORY OF ENDOCARDITIS

RALPH H. MAJOR

The first description of endocarditis, according to Laënnec, was that of Lazare Rivière, professor of medicine at the University of Montpellier. Rivière, according to Astruc, had considerable difficulty in obtaining his doctor's degree, but, he adds, this "did not prevent him from becoming an able professor and a physician of reputation, and I have believed that I should cite this example, to encourage those to whom a similar misfortune might occur." Astruc praises the writings of Rivière, noting that "the style is clear, the diseases are well described, and the treatment he proposes for each, sensible and judicious and but little different from that in use today" (one hundred and twenty-seven years later). Of his *Observationes Medicae* Astruc wrote, "In reading these observations one can easily see that they come from a wise and sensible physician." Among these observations is the case mentioned by Laënnec.

Rivière's patient was a councillor who consulted him in 1646 complaining of palpitation of the heart. Rivière "found the pulse small, irregular, with every variety of irregularity." The patient continued to perform his duties, but a month later took to his bed, showing difficulty in breathing and swelling of the legs. Various medicines were prescribed "to enumerate which would be superfluous. These aided not at all, and the patient grew steadily worse, suffered from the greatest difficulty in breathing, no pulse appeared at the wrist, and when the hand was applied over the region of the heart, a most rapid, weak and irregular palpitation was felt. Presently the swelling of the legs increased so that the thighs were involved. . . . Later the difficulty in respiration increased, the bloody sputum increased, the eighth day, he died in the hours of evening."

Rivière continues, "In the left ventricle of the heart, round caruncles were found like the substance of the lungs, the larger of which resembled a cluster of hazel nuts and filled up the opening of the aorta." This description, while lacking in anatomical clarity, would seem most surely that of vegetations on the aortic valve, projecting into the aorta. After all, the anatomy of the heart was poorly understood in 1646. Although the Hippocratic *Treatise on the Heart* describes clearly the valves of the heart, as does Galen's *Utility of the Parts of the Body*, yet it was not until 1715, according to Garrison, that Raymond Vieussens, a later professor at Montpellier "first correctly described the structure of the left ventricle."

In 1706 the fright of the Roman populace at the number of sudden deaths, led Pope Clement XI to commission Giovanni Maria Lancisi with the task of determining their cause. In his *De subitaneis mortibus*, first published in Rome in 1707, he described endocarditis in the "dissection of the cadaver of the most illustrious dancer Spada." The description is brief and clear; clinical data are unfortunately not given.

> The heart however exteriorally showed nothing save dry spots, and dried old fibres in some sulci; on the interior however (although bloody and entirely free from polyps) showed something hardening, certainly rare to the human memory, indeed at the orifice of the aorta there were uneven structures in the individual semilunar valves, and small fleshy nodules (sarcomata) which protruding in threads and fragments like condylomata, extended inside the aorta; nor was it possible to tear them off short of rupturing the valve, so there was no doubt but that these firm bodies were judged to arise from the lengthened fibres and tissues of the valves and not indeed by simple adhesion. Lastly, within the descending aorta there was discovered an irregular and round mass, truly of the nature of a polyp, filling up almost the entire cavity.

Giovanni Battista Morgagni, called with reason the father of pathology, in his epochal *De sedibus*, published in 1761, described an undoubted example of endocarditis. Morgagni, in his inimitable style, described a patient who "fell into a disease which seemed to be a dropsy of the thorax. . . . His legs being swell'd, his pulse being very low, and a virulent gonorrhea, moreover, afflicting him, he died."

At autopsy the aortic valves were "swell'd out into short and unequal excrescences; by the load of which being weigh'd down, they were all brought so near together by this means, as to leave but a very narrow passage betwixt each other through which the blood might pass out. But when I examin'd each valve in particular, I saw that the right had its border much shorter than usual, or was become less transversely; and that the left was ruptur'd through the middle, from the border quite to the lower part; and that from the very lips of this rupture other excrescences were protuberant. . . . Having seen these things, and other praeternatural appearances being look'd for in vain in the aorta and the other vessels. . . . I went on to examine into the remaining parts." Morgagni noted that "The spleen, being internally soft, had on the external surface some thick adipose ramifications, as it were, if our eyes were to be believ'd; but the substance of them was of a tendinous firmness, and even of a middle nature betwixt a cartilage and a ligament."

This patient obviously died of endocarditis and showed an infarction of the spleen. The normal appearance of the aorta would exclude a syphilitic

aortitis with involvement of the aortic valves. The statement that the patient was afflicted by a virulent gonorrhoea might suggest that it was a case of gonorrhoeal endocarditis. This account of Morgagni is the first clear description of a verrucous ulcerative endocarditis with splenic infarctions—a pathological picture so commonly seen by his successors.

Edward Sandifort, professor of anatomy at Leyden, in 1777 described very briefly the pathological findings in endocarditis and published what is probably the first illustration of this disease. Matthew Baillie refers to diseases of the heart valves in his *Morbid Anatomy*. While he discusses ossification and thickening of the valves in some detail, he dismisses inflammation of the valves in a few words. "I have also seen the valvular apparatus between the auricle and ventricle, in a state of inflammation, and covered with a layer of coagulable lymph: but this I believe to be very uncommon."

Corvisart in 1806 devoted a chapter in his *Essai* to "vegetations of the auriculo-ventricular valves and of the semilunar valves. In one of his illustrative case histories he describes the autopsy on a man of 39 whose mitral valve "from its margin, when loosened, there hung many kinds of rather irregular, rather long vegetations and resembled much certain venereal excrescences." Similar vegetations were found on the aortic valves. Corvisart remarks that the nature of these vegetations "would be entirely unknown if a perfect resemblance with the syphilitic nodules and cauliflowers . . . did not lead one to think that their nature could be syphilitic." He adds, "Is it more difficult to believe that venereal vegetations could form on the valves of the heart than on the delicate skin of the gland, of the interior of the prepuce, the labia, the interior of the mouth, etc.?"

Corvisart's famous pupil, Laënnec, disagrees with his master in regard to the origin of valvular vegetations. Laënnec notes, "The resemblance between these vegetations and the venereal excrescences of the genitalia has suggested to M. Corvisart that they might have the same origin. I do not know on what grounds this opinion is based: it appears to me improbable, if one compares the frequency of syphilitic affections with the rarity of the vegetations of which we are treating. I have, besides, encountered some of these excrescences in subjects, who, according to all probability, had never had any venereal disease." Laënnec describes several classic examples of vegetative endocarditis, giving the clinical history, the physical signs and the autopsy findings. His Observation XLVI, a young man of thirty-five who was ill for four months with giddiness, suffocation, and palpitation of the heart, and who showed at autopsy

vegetations on the mitral valve with rupture of the valve, was probably an example of subacute infectious endocarditis.

Bertin and Bouillaud in 1824 published a book on diseases of the heart. Chapter IV of this work is headed "concerning induration and vegetations of the valves of the heart and stenosis of its different orifices." In this chapter they describe several cases of typical subacute endocarditis with case histories and autopsy findings. Bertin at this time was senior physician to the Hospital Cochin and professor of hygiene. Bouillaud, his young assistant, gave valuable aid in the preparation of this work, which, according to the title page, was edited by Bouillaud.

Jean-Baptiste Bouillaud, according to Garrison, "although a furious blood-letter, was one of the ablest diagnosticians of his time." Herrick, who has written an excellent account of Bouillaud and his work, notes: "He was the first accurately to describe the endocardium (the name is his); the first to conceive of this membrane as the seat of an inflammation, which he called endocarditis, and the first clearly to describe the stages of this inflammation. . . . Bouillaud's second major contribution to cardiology was his contention and proof of the frequent association of endocarditis and pericarditis with acute inflammatory rheumatism. . . . It is true that Bouillaud had his shortcomings. One may shudder at his wholesale bleedings; one may smile at his rancorous criticism of others; one may regret his waste of time and energy in trivial contentions for the rather empty glory of priority. Overlooking these minor shortcomings, one must honor him for his persistent contention that his views were novel, sound and fundamentally of great importance." Bouillaud incontestably introduced the terms endocardium and endocarditis into medical literature. In his *Traité clinique des maladies du coeur*, first published in 1835, he traces clearly the clinical picture of endocarditis, discussing its physical signs and the findings at autopsy.

One of the earliest, if not the earliest description of endocarditis with embolism is from the pen of Rudolf Virchow and was published in the first volume of Virchow's *Archiv* in 1847 and republished in his *Gesammelte Abhandlungen*. The pathological summary of this case, a young man of 27 who was ill some two and one-half months was: "Thickening and narrowing of the mitral valve, fibrous softening coagulum on the same. Infarcts in the cerebral artery, left femoral artery and right iliac artery. Hemorrhagic infarctions of the spleen."

Five years later, in 1852, William Senhouse Kirkes published one of the earliest and clearest descriptions of subacute endocarditis with embolism. This paper is frequently referred to as the earliest descrip-

tion of endocarditis with embolism but was in fact preceded by that of Virchow.

Virchow, in 1856, in his classic studies on thrombosis and embolism, stressed anew the role of endocarditis in the production of emboli. In many of his cases microscopic examination of the thrombi showed numerous small granules smaller than the nuclei of leukocytes. He found these small granules insoluble in potassium hydroxide, acetic acid and nitric acid and speaks of their " possible close relation to endocarditis." On one occasion he describes " innumerable vibrions " in a thrombus. Intensely interested at that time in the development of cellular pathology, Virchow, at first, apparently paid little attention to the new science of bacteriology. In the first edition of Virchow's *Cellularpathologie* (1858), the author again emphasizes the relationship between endocarditis and embolism and, in the fourth edition (1871) discusses the role of " those smallest organisms which have been described as vibrions, bacteria and micrococcus."

In 1869 Emanuel F. H. Winge demonstrated before the Medical Society of Christiania, a case of ulcerative endocarditis with embolism of the lungs, kidneys and spleen. He noted " on the aortic valves greyish, feltlike masses resembling thrombi, the size of a pea to that of a bean, easily scraped off, leaving a rough ulcerated endocardium beneath." Under the microscope, the thrombus-like masses " proved with moderate enlargement to be a fine felt of fibrinous threads." When the higher power was employed " these threads were clearly crisscrossed or formed like a rosary of short rod-shaped bodies or round granules, like chains of leptothrix. Also a mass of round and rod-like granules."

Heiberg in 1872 reviewed this case of Winge's and reported another case of his own. Heiberg considered the organism in both cases to be a leptothrix. Virchow, who studied the tissue, adds some comments to Heiberg's paper. " I wish to warn," writes Virchow, " against calling these bodies immediately leptothrix. . . . According to the older terminology, the bodies found by Herr Heiberg would unquestionably be called vibrions." Virchow obviously refers to the classification of Ehrenberg, who described under " vibrions," organisms we recognize today as chains of cocci, or as bacilli of various sizes and shapes.

The papers of Winge and Heiberg, together with the observations of Virchow, are landmarks in the history of endocarditis. These observers proved the infectious nature of endocarditis and the associated emboli. These observations of Virchow, Winge and Heiberg were made before the introduction of staining methods for micro-organisms by Weigert in 1871, an innovation which gave greater precision to microscopic diag-

nosis. Klebs in 1875 expressed his conviction that all cases of endocarditis were infections in origin and supported his views with a series of twenty-seven necropsies with the demonstration of bacteria in the valvular vegetations of each case.

In 1878 Koester, in a paper on embolic endocarditis, described a patient who had been ill for five weeks with fever, pains in the joints, and dyspnea. At autopsy he found large vegetations on the mitral valves and infarcts in the spleen. The vegetations on the heart valves showed "masses of micrococci in a finely granular and fibrillary mass in which there were only a few lymphocytes present, necrotic and granular destruction of the underlying valvular tissue." His description of the patient's history with the autopsy findings is very suggestive of subacute bacterial endocarditis.

The first case of gonorrhoeal endocarditis was reported by Ricord in 1847, long before the discovery of the gonococcus or the introduction of staining methods. In 1893 von Leyden described a case of gonorrhoeal endocarditis in which the organisms were demonstrated in sections from the heart valves. The first successful blood cultures in gonorrhoeal endocarditis were reported by Thayer and Blumer in 1895.

From this period we find endocarditis discussed with increasing frequency. Eichhorst discusses endocarditis at length in his textbook. Rosenstein's article on endocarditis in von Ziemssen's *Encyclopedia* is an exhaustive treatise on the subject. Leyden, in 1882, discussing the relationship of intermittent fever to endocarditis, describes subacute endocarditis appearing on a previously damaged heart valve. He demonstrated streptococci in the vegetations on the valves and described embolic complications.

Eichhorst in his *Handbuch der speciellen Pathologie und Therapie*, published in 1883, classified endocarditis as acute endocarditis, subacute endocarditis and chronic endocarditis. Acute endocarditis he further describes as septic endocarditis, subacute as endocarditis verrucosa and chronic endocarditis as endocarditis retrahens.

Osler gave a very concise yet comprehensive picture of malignant endocarditis in his Gulstonian lectures of 1885. He stressed the frequency with which the disease attacked valves previously damaged and states that this was true in three-fourths of his Montreal cases. He discussed very fully the clinical picture of the disease and the pathological findings, noting that "micrococci are constant elements in the vegetations."

Heubner in 1899 described five cases of long-continued fever lasting from three to nine months, all of which showed endocarditis with splenic

infarctions at autopsy. The same year marked the appearance of Lenhartz' book *Die Septischen Erkrankungen* which formed one volume of Nothnagel's well-known *Spezielle Pathologie und Therapie*. In this work Lenhartz described acute endocarditis due to the staphylococcus, streptococcus, pneumococcus and gonococcus, and also discussed in detail chronic endocarditis. Lenhartz pointed out that acute streptococcic endocarditis occurs in patients who are extremely ill, show a high irregular temperature with frequent chills, run an acute stormy course, and is usually due to the " ordinary streptoccus." In chronic streptococcic endocarditis by contrast, the onset was often gradual, the course of the disease was milder, petechiae were usually present, infarctions in the spleen and kidneys were common, and cerebral complications such as aphasia and paralysis were sometimes noted. The organism found in the blood cultures of these patients was not the " ordinary " streptococcus but " a delicate, fine streptococcus which is characterized by its slower growth, by the formation of a greenish zone about the individual colonies . . . and is not virulent for animals."

Harbitz in 1899 stressed the differences from both the clinical and pathological standpoints between acute and chronic endocarditis. He grew " small streptococci " from cases of chronic endocarditis and described very accurately the pathological anatomy of subacute endocarditis.

Schottmüller in 1903 stressed the fact that the " ordinary " streptococcus when grown on blood agar produced hemolysis while the " small " streptococcus described by Lenhartz grew with the production of a greenish pigment. For this reason he named the organism Streptococcus *mitior seu viridans* (milder or green growing streptococcus). He stressed the importance of the green growing streptococcus in the etiology of chronic and subacute endocarditis. In subsequent articles he emphasized the fact that this type of endocarditis due to the Streptococcus *mitior seu viridans* was a definite clinical entity which he called Endocarditis lenta. This contribution of Schottmüller is a classic on the subject of endocarditis and following his work, the terms streptococcus hemolyticus and streptococcus viridans became well-known both in clinical medicine and in bacteriology.

American interest in subacute bacterial endocarditis dates largely from the publication of Libman and Celler's classic paper in 1910. These authors studied forty-three cases of subacute endocarditis and described in detail the type of organism isolated. Since the publication of these papers, the American literature alone on the subject of subacute bacterial endocarditis has grown to large proportions, which bears witness not only

to the increased interest in this disease but also to its growing clinical importance. Several excellent analytical reviews of subacute bacterial endocarditis have been written during the past two decades. Outstanding among these is the review of George Blumer which appeared in 1923.

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DR. JAMES E. GARRETSON AND THE FIRST HOSPITAL OF ORAL SURGERY

HAROLD L. FAGGART

To give the history of oral surgery . . . is also to give the later life of Professor Garretson, and the history of the Philadelphia Dental College for the same period. . . .[1]

Probably no other statement could be more indicative of the position of importance occupied by Dr. James E. Garretson, creator of the first specialty of dentistry, that of oral surgery. Dr. Garretson's life story is a long and interesting one, beginning in Wilmington, Delaware, where he was born on October 18, 1828. There is little recorded of his activities from that date until 1850, when he commenced the study of dentistry with a Dr. Thatcher, of Wilmington. He began his practice in Woodbury, New Jersey, where he remained for a short time before coming to Philadelphia.

In 1854, young Garretson was registered as a student of the Philadelphia College of Dental Surgery, from which institution he was graduated in 1856. Not satisfied with his doctor's degree in Dental Surgery, he began the study of medicine at the University of Pennsylvania. He completed his course in three years, and received his degree of Doctor of Medicine in 1859.

Being a man of unsatiable spirits, he found that academic success alone would not make for a full life, and accordingly, married Beulah Craft of Upper Greenwich, New Jersey, in the same year that he received his medical degree. Three years later, in 1862, Dr. Garretson was made Director of the Philadelphia School of Anatomy. Previously, he was a demonstrator in this institution.

Relative to this association and to the doctor's special interest in the field of surgery, is the beginning of dentistry's first specialized field, oral surgery. In 1864 Dr. Garretson left the Philadelphia School of Anatomy to enter the Philadelphia Dental College as Professor of Anatomy and Surgery. Dr. Garretson was listed as a member of the faculty, and a lecturer on clinical surgery, in the fourth annual announcement of the college bulletin:

[1] "How the Hospital of Oral Surgery Came into Being," Matthew H. Cryer, in his address given at the Golden Jubilee celebration of the Philadelphia Dental College.

Fig. 1.

Dr. James E. Garretson

In addition to the regular course of instructions, the most enlarged opportunity will be afforded the student to study the various surgical affections of the mouth and associated parts. Lectures and demonstrations will be given by Dr. James E. Garretson, on all the surgical diseases of the body with a view to the proper preparation of the student for the practise of oral surgery. An oral surgical clinic will be held weekly, at which all special diseases will be treated and the necessary operations performed before the class.[2]

This notice would seem to be conclusive evidence that oral surgery was being taught at the Philadelphia Dental College as early as 1866. It is to be noted, however, that Dr. Garretson did not have the title of oral surgeon at this time. The first official recognition of oral surgery as a specialty was given in 1869, when Garretson was appointed Oral Surgeon to the Hospital of the University of Pennsylvania.

It was through the efforts of Dr. Garretson that this special sphere of surgery and dentistry was evolved. But, just as all pioneers were criticized, so was Dr. Garretson. There were numerous complaints that the division was unnecessary. These objections were closely allied with the medical prejudice, common to that period, that specialties were objectionable. In connection with this, the doctor was often asked in what way oral surgery differed from general surgery. Whether or not the renowned doctor ever answered this is not known, but it is known that by his skill he so impressed his individuality on his work that oral surgery became a special branch of teaching and was adopted as part of the curriculum of the leading dental colleges of the United States.

It was also in 1869 that Dr. Garretson published his work on *Diseases and Surgery of the Mouth and Jaws and Associated Parts*. His book was immediately adopted as a text by several of the dental colleges then in existence. This is one example of the general attention of the medical world that the doctor drew to the importance of this branch of surgery.

In 1878, Dr. Garretson left the University of Pennsylvania Hospital to re-enter the Philadelphia Dental College as professor of anatomy and surgery. The following notice appeared in the college bulletin for 1879:

With the present session, the faculty of the Philadelphia Dental College inaugurates a change in the programme of the school which can scarcely fail in meeting with a hearty approval on the part of the profession at large, inasmuch as it offers opportunity for the most extensive surgical education, while at the same time the periods of progressive steps are left optional with the matriculates. The future of the specialty the faculty does not take it upon itself to decide; that great change, however, is not far off, cannot be overlooked nor denied. With a majority, the practice of the specialty is limited strictly to dentistry. By a constantly enlarging

[2] Bulletin, Philadelphia Dental College, 1866-67.

minority it is being extended to cover the ground of what is becoming more and more familiarly known as Oral Surgery. Members of the medical profession are constantly coming into the specialty and dental graduates aspire more and more to a general education in medicine. It is the object of the change now made to complete a link so evidently uniting the two professions. In place of the usual single course as heretofore given, there will be three separate examinations arranged as follows:

Course 1—This is the regular dental course of the College; it extends over a period of two Winter sessions of five months each, with the Spring and Fall courses (four months) in addition. The degree conferred is Doctor of Dental Surgery.

Fig. 2.

First Hospital of Oral Surgery, 108-110 North 10th Street.

Course 2—This course of five months is designed for the instruction of graduates of respectable Medical Colleges in dentistry proper. While the full curriculum of the School is open to the student of this course, he will be expected to pay special attention to the instruction of the Professors of Operative, Mechanical and Practical Dentistry.

Course 3—Arrangements have been made with the Jefferson Medical College, whereby students of the Philadelphia Dental College may obtain the two degrees, D. D. S. and M. D., in three years. Students taking this third course will be required during the second year to pursue extra studies in Surgery, practice of medicine and obstetrics.

The department whose contributions were most significant was that of Oral Surgery. So rapidly did its importance increase that the college became known as the Philadelphia Dental College and Hospital of Oral Surgery. Matthew H. Cryer, in his address " How the Hospital of Oral Surgery Came Into Being," states that as the department advanced, so did the college which gave it birth:

" I was identified with Oral Surgery as Chief of Clinic for many years, and after Dr. Garretson's death, was Adjunct Professor. Reviewing

Fig. 3.

The Hospital of Oral Surgery was located over the Third National Bank for two years.

momentarily the initial struggle facing the hospital, I might point out that there was no proper place for the practice of oral surgery in the building occupied by the dental department. Consequently, a small room was rented on the fourth floor of an adjoining building, and a door cut through. At first there were but two cots, a few sheets and a place to keep dressings in. The food was obtained from a nearby restaurant and the students served in the capacity of nurses.

"This condition, of course, could not last long as the demands of the hospital became greater. As a result, other rooms were procured in order to accommodate patients coming from all parts of the United States and Canada. To accomplish this, Dr. Garretson, together with a few medical and dental colleagues, obtained quarters over the Third National Bank and organized a new hospital, the 'Medico-Chirurgical Hospital.'

"This new location filled the requirement for only a few years, when a location on Cherry Street was secured. This building was used jointly

Fig. 4.

Medico-Chirurgical Hospital and College, and Philadelphia Dental College, Cherry below Eighteenth Street, Philadelphia, Pa.

by the Philadelphia Dental College and Hospital of Oral Surgery, and by the Medico-Chirurgical Hospital. All that was lacking at the time were facilities for lectures and demonstration; thus it is evident that although the two institutions maintained their separate titles, and worked independently to a large extent, the Medico-Chirurgical Hospital was virtually the result of the activities of the Hospital of Oral Surgery which was founded by Dr. Garretson."

In 1889, the General Bulletin of the Philadelphia Dental College carried the following special notice.

The Specialty of Oral Surgery

It is assumed as being now generally understood that the study and practice of oral surgery necessitates experiences which are not justly to be expected of students who propose to confine future relations with the public to the duties pertaining to dentistry proper. Dentistry is taught in the Philadelphia Dental College as a profession in itself. Oral surgery is a specialty which demands for its acquisition graduation in both dentistry and medicine. The relation of the Dental School to the specialty is that it affords the dental portion of an oral surgeon's education and, this accomplished, he is passed to a medical school. The Associate Medical School is the Medico-Chirurgical College.

This institution numbers twelve professors and thirty-four adjuncts as its teaching corps. The advantages it offers for the study of general medicine and surgery and the specialties are not excelled by any similar institution. Its clinical service is very large, and is rich in every variety of cases.

An intermediate, or rather a necessarily doubly related organization is the

Hospital of Oral Surgery

This establishment, organized a number of years since, under the fostering care of the Philadelphia Dental College has now grown into such clinical significance that enlarged and increased accommodations are compelled and have been found in a joint relation of its interests with the Philadelphia Dental and Medico-Chirurgical Colleges. With a view to requirements on the part of both institutions, a union of means and facilities has been made under the corporate name of

The Medico-Chirurgical Hospital,

a change which makes the Oral Hospital part of this general institution. The accommodations now at command of the service consist of a thoroughly equipped hospital, having male and female wards, two resident physicians always on duty, an apothecary, a matron, and a janitor together with a corps of trained nurses and attendants. The hospital is situated on common ground with the Medico-Chirurgical and Dental Colleges. The Faculty have great satisfaction in announcing the completeness of this hospital; nothing seems left to be desired. Oral surgery may now be taught as regularly and as systematically as dentistry proper. Students commencing their studies with dentistry are passed progressively toward the hospital clinics and through the medical school as they are prepared. This course covered three years and conferred the two degrees of D. D. S. and M. D.

It is desired to inform the profession that every necessary accommodation is to be secured in this hospital for private patients, and that free beds as well are supported by an Aid Society for the relief of the worthy poor, the number of these beds corresponding with the means furnished by the Legislature of Pennsylvania in its appropriations, and with contributions made by the faculties and by charitably disposed persons.

James E. Garretson, M. D., D. D. S.

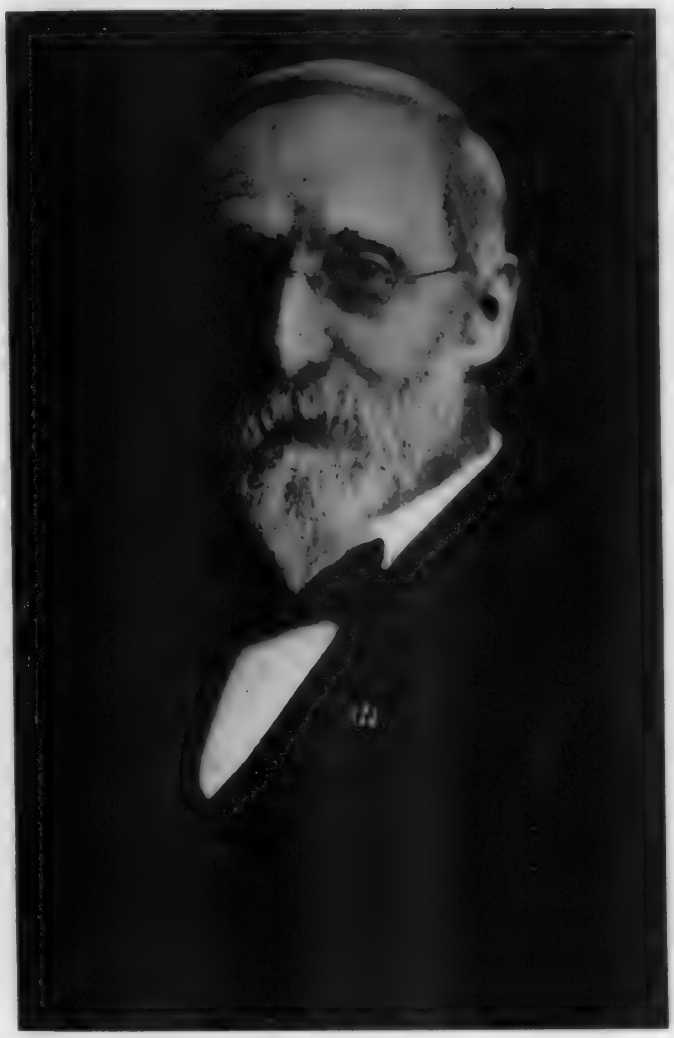

Fig. 5.

Dr. Matthew H. Cryer

Surgeon in charge of the Oral Department and one of the General Surgeons to the Common Hospital.

M. H. Cryer, M. D., D. D. S., Chief of Oral Clinic.

Dr. Garretson realized the crudeness that was characteristic of early operations performed on the head, face, and jaws. He felt that the special training and operative methods of the dentist were, with suitable modifications, directly applicable to surgery within his own selective sphere. Putting this principle through practical tests, he soon found that he had struck the keynote to success.

The whole complexion of his operations differed essentially from that of his predecessors or by the majority of his contemporaries, whether viewed with relation to his technique or in regard to the results he obtained. His work was distinctly conservative in character. He constantly kept in mind the cosmetic effect, and as a result he designed and performed his operations with the definite purpose of avoiding, as far as was possible, permanent mutilation. Whenever he could, he would operate within the mouth in order to avoid external incisions. This principle was utilized in the removal of the entire superior maxilla.

In line with this conservatism was the cardinal principle of never removing healthy tissue that might in any degree help to bring about a normal restoration of function within the territory of the operation. His operations on the inferior maxilla always involved this feature as far as conditions permitted. Hence, it was his custom to leave a thin basilar rim of bone and periosteum for inducing the reformation of the maxillary ridge to be utilized as a base of support for an artificial denture.

The following picture of Dr. Garretson is given by one of his former students:

" Dr. Garretson's lecture and clinic hour was from five to six o'clock on Wednesday afternoon and was open to the profession, and at times guest dentists and physicians outnumbered the students in attendance. Dr. Garretson would enter the amphitheatre, a striking personality with a distinguished bearing, slender, above the average in height, a slight stoop to his carriage which was most attractive. He had a rather aquiline nose, most kindly eyes and mouth, was clean-shaven except for what are known as ' side burns,' dressed in black of remarkable neatness, a turned down collar with a white lawn string tie, frock coat with an edging of white on the waistcoat collar, black overgaiters of cloth over well polished shoes.

" Dr. Garretson would bring notes to his lecture, but seldom used them beyond the first five minutes of his lecture regardless of subject matter.

Fig. 6.

Dr. Henry C. Boenning

He would not go far with his lectures before one would gain the impression that there was something pleasing and fascinating in his manner and bearing which was out of the ordinary."

The story has been told how in 1883 at Providence, Rhode Island, Dr. Garretson sought to annihilate Dr. Leon Williams in a debate on the development of the teeth. This was a verbal battle between a young scientist and a great surgeon. Dr. Williams had done a vast amount of research work on the subject, and to the embarrassment of Dr. Garretson, won the debate.

A few years later, there occurred an amusing reminiscence of the debate at Providence. Dr. Williams and a well-known teacher of dentistry attended a surgical clinic at the Philadelphia Dental College. Dr. Garretson was operating. The operation was for the removal of a large part of the superior maxilla and malor bones on the side. The patient, already anaesthetized, was just being laid on the operating table when Dr. Williams and his friend entered the crowded amphitheatre. They were quietly sitting down, when Dr. Garretson's sharp eye had caught sight of them. Instantly he shouted, " Oh, Dr. Williams, is that you? Well, I am the cock of the walk *here* anyhow! " Dr. Williams, in relating the circumstances, said he was " Cock of the walk truly, for I never saw a more brilliant piece of oral surgery than he performed that day." In surgery he was master of the situation, while in histology he was not; that made all the difference.

Attesting to the versatility of Dr. Garretson is the fact that his career was not limited to surgery or dentistry. The doctor published many works on surgery and its related fields. However, even here, he did not stop. Dr. Garretson was markedly intellectual, and often injected into his lectures his philosophy. Although his philosophy embraced some of the profoundest thoughts, he conveyed them in a most entertaining manner with the least possible attempt at superiority.

His studies in the realm of philosophy led him to diverge in his writings on surgery and dentistry. For these diversions of thought, he chose the nom-de-plume of John Darby. Among the outstanding pieces of literature were *Brushland, Thinking and Thinkers, Odd Hours of a Physician, Nineteenth Century Sense,* and *Man and His World.* These, of course, added to his reputation as a thinker and philosophical writer.

It was in 1895 that Dr. James E. Garretson died. His death was a distinct loss to the school and the dental profession as a whole. He was succeeded by Dr. Henry C. Boenning, and in the following year, 1896, the Philadelphia Dental College and the Hospital of Oral Surgery severed

Fig. 7.

The Surgical Amphitheatre, Dr. Henry C. Boenning operating.

Fig. 8.

Ward in Garretson Hospital.

relations with the medical school and moved to their own building at 18th and Buttonwood streets. Here the Hospital of Oral Surgery occupied a large portion of the first floor of the new building where the accommodations for hospitalization consisted of a public ward and a ward for private patients, a nurses' room, a kitchen, bath, etherization and recovery room.

Dr. Matthew H. Cryer, who had been associated with Dr. Garretson from the beginning of the hospital, resigned in 1896 to accept the position of Oral Surgeon at the University of Pennsylvania.

On September 20, 1897, a charter was granted the hospital when it was regularly incorporated and the name changed to the Garretson Hospital in honor of its founder. The school was known as the Philadelphia Dental College and Garretson Hospital of Oral Surgery. The hospital consisted of the following directors: Henry C. Boenning, Simeon H. Guilford, Leo Greenbaum, Samuel B. Howell and Thomas C. Stellwageon. The hospital staff was organized with the following members: Chief of Staff—Henry C. Boenning, M. D.; Staff Assistant—H. Augustus Bacon, M. D.; Chief Surgical Assistant—W. Wallace Fritz, M. D.; and Chief Medical Assistant—C. P. Franklin, M. D.

Charter
of
The Garretson Hospital

The subscribers, who are all citizens of Pennsylvania, having agreed to associate themselves for the purposes as set forth in the following article, and desiring to become incorporated pursuant to the provisions of an Act of Assembly approved the 29th day of April, A. D. 1874 (Pamp. Laws 73, Sec. 1), being an act of the General Assembly of the Commonwealth of Pennsylvania entitled, An Act to provide for the Incorporation and Regulation of certain Corporations, approved the 29th day of April, Anno Domini One Thousand Eight Hundred and Seventy-four, hereby declare that the following are the Articles, purposes and objects of the Association for which they desire to be incorporated.

The name of the proposed corporation is The Garretson Hospital.

The corporation is formed for the support of a charitable and medical undertaking.

The work of the corporation is to be transacted in the buildings at the Southwest corner of Eighteenth and Buttonwood Streets, Philadelphia.

The corporation is to have perpetual existence.

Fig. 9.

Garretson Hospital.

There is no division of the capital into shares of stock; the purpose of the associated (incorporators) being to maintain the Hospital by contributions of money and services from themselves and others.

HENRY C. BOENNING,
SIMEON G. GUILFORD,
THOMAS C. STELLWAGEON,
LEOPOLD GREENBAUM,
SAMUEL B. HOWELL.

Fig. 10.

Garretson Hospital Ambulance.

The Garretson Hospital of Oral Surgery occupied one-half of the floor of the main building on Buttonwood Street. With the continued growth of the hospital and steady increase in the number of patients applying for treatment, its quarters in the dental school building soon became inadequate and an application was made to the Legislature of 1903 for an appropriation towards the erection of a building, and equipment devoted entirely to hospital purposes. The sum of $40,000.00 was voted, $25,000.00 of which was for the new building and $15,000.00 for maintenance. Plans were drawn up and after they had been approved by the

state, the erection of the new building was begun on a plot of ground on the north side of Hamilton Street above 18th. The sum appropriated proving only sufficient for the laying of the foundation and the construction of a shell of a building, further work had to be abandoned until two years later when another appropriation was obtained from the State suffi-

Fig. 11.

DR. CARLTON N. RUSSELL

cient to complete the lower floors of the building and fitted for occupancy.

In 1907, the Philadelphia Dental College and Garretson Hospital was affiliated with Temple College, and a short time later the Medical School of Temple College moved into the buildings of the Philadelphia Dental College. At this time the medical school was a night school and made use of the lecture halls and laboratories in the evening. In 1907, the Garret-

son Hospital Staff consisted of the following members: Surgeon-in-Chief—Henry C. Boenning, M. D.; Attending Surgeons and Physicians—H. Augustus Bacon, M. D.; W. Wallace Fritz, M. D.; Clarence P. Franklin, M. D.; Swithin Chandler, M. D.; William A. Hitschler, M. D. and Thomas Scheel, M. D.

The Consulting Surgeon was John B. Deaver, M. D., with Pathologist Thomas C. Stellwageon, Jr., M. D.; Resident Physicians John Peoples, M. D. and Edward O. Bang, M. D; Radiographer and Pharmaceutical Chemist M. Hagopian, Ph. D., D. D. S.; and Chief Nurse Emily R. Koser. The following year the Hospital Staff was reorganized due to the affiliation with Temple College, and W. Wayne Babcock, M. D., succeeded Henry C. Boenning, M. D. as Professor of Anatomy and Surgery, and Surgeon of Oral Clinic.

In 1911, Carlton N. Russell succeeded Dr. Babcock as Adjunct Professor of Oral Surgery to the hospital. Temple College secured a charter for a university in 1910 and became known as Temple University. In the same year by an order of court, the Garretson Hospital was officially merged with the Temple University. This was the end of the Garretson Hospital of Oral Surgery. The building has since been used for laboratories and for the School of Oral Hygiene.

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HEALTH AND DISEASE AMONG THE MANGYANS

ILZA VEITH

In 1939, the Witte Memorial Museum of San Antonio, Texas, published a collection of writings, in both prose and verse, by various Mangyan men and women.[1] These writings—or, more precisely, engravings—had been transcribed from strips of bamboo which to this very day are the form of writing paper and stationery the Mangyans use.[2] The transcriptions are accompanied by transliterations as well as translations and contain valuable information about the habits of life among the people that dwell in the hilly and wooded interior of the island of Mindoro.

Like almost all Filipinos the Mangyans, or forest people, are of the Malay race but in addition have a strong admixture of the blood of the aboriginal Negrito.[3] They have advanced but little beyond the Negrito in civilization. Estimates of the number of Mangyans in existence vary between 7,000 and 15,000, for their settlements are thinly scattered throughout the dense forests and the taking of a reliable census is therefore impossible.[4]

Two reasons account for this dispersion of living quarters: 1) the Mangyans have always been under the necessity of making themselves less vulnerable to attack by the neighboring Tagálogs or the piratical Moros; 2) the Mangyans are nomads by nature and disinclined to permanent settlement anywhere. Moreover, their strong superstitions tend to support the nomadic instinct. In many cases, as soon as a death occurs, the family of the deceased feels impelled to leave their home and belongings; sometimes they even change their names in order to mislead the evil spirits.[5]

The Mangyans have remained untouched by Christianity or Spanish civilization, neither of which succeeded in penetrating into the interior of Mindoro. The American administration, however, in its effort to improve the living conditions of the inhabitants, even in the outlying sec-

[1] *Indic Writings of the Mindoro Palawan Axis* with Mangyan Grammar and Vocabulary by Fletcher Gardner and Ildefonso Maliwanag. 3 vols. Published by the Witte Memorial Museum, San Antonio, Texas. 1939.

[2] *Indic Writings*, vol. II, p. 32.

[3] *The Philippine Islands* 1493-1898. Edited and Annotated by Emma Helen Blair and James Alexander Robertson, vol. 40, p. 47.

[4] *Ibid.*, see also *The Philippines Past and Present* by Dean C. Worcester. New York, 1914, vol. II, p. 591.

[5] *The Philippines Past and Present*, vol. II, p. 592.

tions of the island, has been instrumental in establishing several villages of Mangyans. Governors R. G. Offley and Louis G. van Schaick, who at the beginning of this century instituted this program, had to overcome not only the innate prejudice of the people—hitherto used to roaming, and unskilled in any agricultural method—but also the opposition of the Tagálogs, who saw in the formation of villages a possible organization of defense against their exactions. Being familiar with the nature of the Mangyans, the Tagálogs sometimes resorted to a clever form of "psychological warfare." Knowing that the Mangyans were desperately afraid of smallpox, they proclaimed that an epidemic had broken out in one of their own villages, and the Mangyans immediately abandoned their newly constructed village, purified themselves by jumping through fire, and disappeared into the forest.[6] Nevertheless, the efforts of the American governors were not entirely without success; some permanent settlements have remained and, on the whole, the habits of the Mangyans have become more stationary.

As may be expected, literacy is exceedingly low among such a primitive tribe, yet there exists a Mangyan script. It is written horizontally and from left to right, and shows the Hindu influence that came by way of the Malay peninsula, Java, and other islands.[7] The Witte collection of Mangyan writings, compiled and translated by Major Fletcher Gardner and Ildefonso Maliwanag, contains a 5000 word dictionary of this Indic language. The entire collection should prove of great interest to philologists, but for the purposes of this paper the Mangyan writings thus made available are of supreme interest to the student of tribal sociology, health, disease and medical treatment.

The writings cover a period of thirty-five years, from 1904 to 1938. By arranging the various items in the three volumes along more or less unified topical lines we obtain a fairly vivid, and no doubt accurate, reflection of Mangyan life.

Childbirth and Childhood

Not long ago I found a Mangyan woman just delivered. The child was a boy. He was called Pedro by his father and his mother. Because Pedro was the first man who arrived after the baby was born. They are good nurses in childbirth, but there is just not much opportunity to be clean with the baby.[8]

[6] *Ibid.*

[7] For a discussion of the various languages and scripts of the Filipinos, see *The Philippine Islands*, vol. 40, p. 48 ff. See also: "Lingualization in Austronesian Languages" by Fletcher Gardner. *Papers of the Michigan Academy of Science, Arts, and Letters*, vol. XXVII, 1941, pp. 511-514.

[8] *Indic Writings*, vol. I, p. 28. See also *The Philippine Islands*, vol 40, p. 57 ff.

The newborn baby is not buried even though it is not welcome to the girl, but she seeks a foster mother. The baby is now made welcome where formerly it would have been destroyed.[9]

Few among us reach the age of fifty years. Sometimes they die while they are children, sometimes in age. There are few who are without dead brothers and sisters. Many die in childbirth. Many new-born die of sickness among us.[10]

Very important is the care of a Mangyan for his child, no matter how poor he may be. It is against custom to scold or whip the child. The grown people are very patient, the children are always obedient, always slow to quarrel, always valued dear, and easy to teach. One little fish is divided equally to all. Gentle always is the care of those who are sick.[11]

Courtship and Marriage Customs

Courtship starts early. Children of twelve, thirteen or fourteen begin to think of courtship and marriage, and the boy practices the guitar which he will need to accompany his courting. Actual courtship is a fulltime occupation; the young lover devotes himself to the improvement of his own appearance and to fighting off possible rivals. Before he can marry, however, he must obtain the approval of the prospective bride's parents, after which he must undergo a few days of service to the girl, during which time she may not be courted by any other boy. If she finds his service agreeable the marriage ceremony is performed by the tribal chief.

It is clear that there are no impediments to early marriages—girls frequently marrying before they reach the age of menstruation. But there are definite restrictions as to the choice of a partner. Marriage between members of the same family is prohibited. " Marriage is forbidden with our child, father, mother, grandparents, uncle, cousin or second and third cousins and all near relatives." [12] Because of this prohibition it is written that " the bachelor always courts in distant places." [13]

Polygamy seems to be the rule among the Mangyans, for many entries refer to the adjustment of the first wife to the arrival of successors [14] and, according to one entry, all wives of one husband must be of the same family.[15] But before the arrival of the second and third wife is approved by the first wife, the husband is obliged to pay her twelve pesos.[16] It seems that under the same arrangement the wife could formerly marry two men, but this practice has been discontinued.[17]

[9] *Indic Writings*, vol. II, p. 35.
[10] *Ibid.*, vol. II, p. 6.
[11] *Ibid.*, vol. I, p. 30.
[12] *Ibid.*, vol. II, p. 36.
[13] *Ibid.*, vol. I, p. 38.
[14] *Ibid.*, vol. II, p. 13, p. 22; vol. I, p. 38, p. 39.
[15] *Ibid.*, vol. II, p. 13.
[16] *Ibid.*, vol. I, p. 38.
[17] *Ibid.*, vol. I, p. 38.

In general the arrangement of multiple marriages seems to work out harmoniously. The wives "never speak harshly to each other. Precious is their companionship in the household. They are equal in kindness." [18] But occasionally it seems that the payment of the twelve pesos fails to pacify a wife sufficiently to accept a rival; if such a disagreement arises the couple can divorce each other without any further formality.[19] Divorce is not accompanied by any display of bad feeling, and the same spirit of amiability is apparent when the husband discovers his wife's infidelity. "Even though with certainty the husband may find his wife in guilty intercourse, he does not use the bolo. It is sufficient to be given a necklace for recompense." [20]

The occasional encounters between Mangyans and Christians have not left a happy impression. One writer states rather resignedly:

> The Christians do not marry with us in true matrimony and also no Mangyan girl has married a Christian here in Mansalay but the Christians beget among us as they climb through the hills.[21]

Food and Eating Habits

In spite of the fact that the Mangyans are now more definitely settled and lead a less nomadic life, their methods of agriculture have not greatly advanced.

> We are not accustomed to plowing. For our usual planting we work a clearing except where there are difficult and large trees. If we are entirely forbidden, if we are restricted, perhaps the sowing will become impossible.[22]

Their main crops are corn, rice, sweet potato, taro, squash, yams, tobacco, peas, beans, cacao, and sugar cane. But if these crops fail the Mangyan is still not at a loss.

> We are not afraid of hunger not storm not heat, although there may be some shortage. The forest yields roots of trees and things that can be eaten. . . . From the buri palm and the sugar palm may be taken a flour which we call "arina." [23]

The vegetable diet is supplemented by the meat of poultry and pigs, and the bag of the hunt consisting of hogs, deer or monkeys.

There is a definite expression of indifference toward salt on the part of the majority of the Mangyans. But for those who prefer to eat their food with salt a recipe for its preparation is given:

[18] *Ibid.*, vol. II, p. 13. [19] *Ibid.*, vol. I, p. 39. [20] *Ibid.*, vol. I, p. 39.
[21] *Ibid.*, vol. I, p. 67. It is fair to assume that the Christians here referred to are white men.
[22] *Ibid.*, vol. I, p. 63. [23] *Ibid.*, vol. II, p. 23.

We go there to the sea. We cut down the trees and burn them to ashes which are quenched with salt water from the sea. The ashes are allowed to drip, and the water which drips away is boiled. The salt is white and hard and is slightly bitter.[24]

The Mangyan does not seem averse to drinking.

The sap from the cocoa, buri, and sugar palms is an intoxicating drink. . . . There are those who know how to make liquor called "ariris" from sugar cane. Its drinking makes great drunkenness.[25]

The Mangyans share the Asiatic taste for chewing.

All Mangyans, children and old people chew betel leaves, areca nuts, tobacco and lime mixed together. The betel leaves, the areca nut, and the tobacco are from our planting. The lime is burned by us at the sea. We make this . . . so that we shall have no toothache.[26]

Physical Structure

Through their occasional contact with white people as well as the neighboring Tagálogs, the Mangyans have obtained a standard according to which they can measure their own physical structure.

We . . . are short. Our height is about seven spans, and we are slender. Our skin color is sunburned. We have no black people. Few have a beard; the nose is round. We have no crooked person among us.[27]

The legs of the Mangyans are small. Perhaps on account of this they are skillful in irrigating their farms. They are not able to carry a bushel of rice on their back.[28]

The writers are aware of the physical shortcomings of their fellow tribesmen but they are content to state these facts without voicing any thought of possible change or improvement.

Poor are our sleeping places. Our houses are bad; eating too much means nothing. On account of this among us, the Mangyan child grows slowly and the body is neglected. The Mangyan with a robust physique lives in the mountains.[29]

These mountain dwellers are also adept with the bow and arrow, which they make more effective by coating with poison.

Various kinds of sap obtained by tapping and gums of trees are mixed together.

[24] *Ibid.*, vol. II, p. 22.
[25] *Ibid.*, vol. I, p. 65.
[26] *Ibid.*, vol.II, p. 28.
[27] *Ibid.*, vol. II, p. 13.
[28] *Ibid.*, vol. II, p. 12.
[29] *Ibid.*, vol. II, p. 19.

It is hardened over the fire so that it can be used . . . as a poison. It will kill a wild pig or a monkey. If the poison is drunk, it will not kill, but if it is introduced into a sore, the man will quickly die.[80]

The Mangyans are very proud of their hair, which serves as a protector of their health.

Often we are asked why we do not cut out the hair. There is only one answer. It is not our custom to cut hair. Why? We will become sick with various diseases. The evil eye would twist our necks. After we are old, if we have not cut it, there will be beautiful hair for us.[81]

To have no hair or to lose it is considered a severe physical defect, and the Mangyans are proud to have few innate defects.

Few among us have children who are lacking in understanding, lacking in will, insane or demented. There are none who have a wide hairlip or are blind or deaf. None are born without their fingers or without feet. There are none who are dumb. There are none who are without hair.[82]

Diseases and Treatment

Yet despite this initial health, the Mangyans fall prey to many diseases. The physician plays an important part in their community, although he is only rarely able to save a patient who is severely ill.

Those who know how to give medicine to the sick are called "Balianan." When the home of the doctor is far away he is not compelled to go. Even though the medicine is given free, a gift should be offered to the doctor. The fruits of trees and the bark of trees are given as medicine. Sometimes the sick are cured.[83]

The Mangyans distinguish two kinds of diseases: those which are brought about by their living conditions and contagion, and those which are brought about by sorcery and evil spirits. In the following two quotations we find descriptions of the first group of diseases:

Very deficient is our clothing . . . and very small our houses. Always our common diseases are those of the skin. Nevertheless, when sickness comes upon us, even though small, we always die. If one is bedfast there is no one among us who can take away the sickness. Our medicines are the leaves of trees and the barks of trees.[84]

Few among us die of coughing sickness. There are none among us who cough. Sometimes we have malaria. We never have bad teeth. Bangon Mangyans are afraid of the person who has a cough or smallpox. If we have smallpox we inform the other districts. We put a rag (signal) on our road.[85]

[80] *Ibid.*, vol. II, p. 21.
[81] *Ibid.*, vol. I, p. 60.
[82] *Ibid.*, vol. II, p. 24.
[83] *Ibid.*, vol. II, p. 8.
[84] *Ibid.*, vol. II, p. 5.
[85] *Ibid.*, vol. II, p. 5.

While the diseases contracted through contagion and environment are incurable, those diseases which are brought upon by magic can be healed. Under these latter conditions an "other doctor," a sorcerer, is called in, in addition to the ordinary physician.

The sick Mangyan is cared for, and the sorcery is treated by a doctor. The father, the mother and the relatives are called. The physician and the witch doctor are called. The doctor says that the sickness comes from the forest. The other doctor, the sorcerer, says that he will drive away the ghosts. It is said not to be a chill. They look for a red cock to be sacrificed for the patient in the house. The spirits are besought (to take away) the evil from the house and forbid the sickness. The Mangyans, if they are sick, . . . cannot enter the house for four days. The black and white stones and the *daniw* [36] at night always work together for the sick person. The sick person if the magical formula is applied will get well. Among us when it is finished, the doctor will be paid a fee of beads (a cent in the form of beads). If a chill is the sickness, we treat them always with watery extracts of roots.[37]

Mangyan sickness differs. According to their belief some sickness comes from the devil of the forest, from enchantment, and from a visit of their dead relatives or ancestors. From his dream the *pamaraan* [38] will tell you where your sickness comes from. He will then cure you by using "kusol" and that *kusol* [39] will be used in massage to your body. He prays earnestly that the *Kusol* may draw out the sickness from the body of the man. By his strong prayers to the owner of the kusol the patient recovers. Among us Mangyans the sacrifice treatment of the sick is used also if the medicine man treats without success the sickness in the body of the person, which originates from the devil, from the deep forest, or from our dead. The others in the house build a little hut close to the dwelling, put in boiled rice, meat or pork, a chicken, and when ready these foods are taken inside the hut, and all the persons therein call their dead relatives or ancestors to take away the sickness. They say, "Here we prepare for you clothing, loin cloths, sheet, beads, rice, meat, chicken and the like we could offer." And calling their dead relatives and ancestors they all say "Let us eat now." By their strong prayers to the dead the sickness is drawn from the body. They pray further to their dead relatives and ancestors not to visit them again and to guard them against devils whether they are in the house or wherever they may be. But if the sickness is natural the *pamaraan* cannot cure the sick even by the form of offerings. If it is still different another doctor is called.[40]

Death and Burial Rites

Death rites and burial ceremonies play an important part in Mangyan life, for this is part of their religious worship. "Our substitute for God is our dead. We worship our dead. This alone is our God." [41]

[36] Daniw; ghost, tutelary spirit.
[37] *Indic writings*, vol. II, p. 33.
[38] *Pamaraan*; Sorcerer.
[39] *Kusol*; substance, essence.
[40] *Indic writings*, vol. II, p. 9.
[41] *Ibid.*, vol. II, p. 35.

By our custom the dead person is wrapped in a mat and with a sheet in the daytime; if it is night, there is no wrapping. Not yet is the burial if the relatives have not arrived. They are awaited two nights. Whether they arrive or not the body will then be taken away. The dead person is asked whether his sickness is by artifice or by the will of God. The dead person is caused to be lifted; if the death is from witchcraft, it will become heavier; if it is not, it becomes lighter. The same means are also used (to learn) if it comes from the will of God. The dead person has a cord tied around his head. The corpse faces to a corner of the house. When the dead is to be carried out, the corner toward which he faces is torn out, and that is the route. The spouse goes out the door and goes around the house to meet the litter. When they have reached the burial ground the earth is already dug out to half a fathom. The grave is covered with seven pieces of wood over it to make a house; it is surrounded by a good fence so that beasts, dogs, and pigs may not reach it. In the house is hung a basket which contains a glass, a pot with rice and his belongings. After a month the seven pieces of wood are taken away, but the pot, glass and betel box are not taken away. After a year's time there is a feast for the bones.[42]

The houses near together have a cemetery well cleared. There are buried by us those who die, and the graves are deep. After a year has passed, the bones are dug up and carried to the house, and a feast is made. There is much boiled rice, pigs are killed, and many the people who assemble. The bones are always offered rice and some meat of pig. Afterwards the bones are told that if they wish to be hidden in a cavern they should become heavier. If they do not so wish, they should become lighter.[43]

Mangyan skeletons are exhumed from the ground within one year from the date of burial. The diggers eat first before they begin the exhumation. Arriving at the burial ground, a white cloth is spread near it. Exhumation begins; while digging some beat the gong and others play the guitar. As soon as the whole skeleton is exhumed, it is wrapped in a white cloth, carried to the house, while followers beat the gong and play the guitar, the bearer of the skeleton being the last. On their way from the burial ground other followers take with them tender branches of young leafy trees signifying to the visitors that the whole skeleton is exhumed, and upon arrival at the house this is followed by a great feast.[44]

When the harvest is finished, preparations are made for a great feast. They kill cows, they kill pigs and have great piles of rice to sacrifice for the dead. Many people are assembled. There are drums and gongs and also dancing. The feast lasts for two days. From year to year a feast is held for the dead, and if there is no rice, they always prepare pork and other things.[45]

[42] *Ibid.*, vol. II, p. 15.
[43] *Ibid.*, vol. II, p. 14.
[44] *Ibid.*, vol. II, p. 16.
[45] *Ibid.*, vol. I, p. 58.

TEXTS AND DOCUMENTS

MEDICAL VIEWS OF A PENNSYLVANIA DOCTOR IN 1850

THOMAS WOODY

How brief the time-span, yet how vast the gulf, that intervenes between the ideas of yesterday and today! Amid sharp contrasts, however, there are certain notable continuities. Solemn testimony to the truth of these observations, in respect to medical views, is found in a discolored manuscript, discovered a few years ago in a deserted old stone house, near Limerick, Pennsylvania. Within the brown-grey pile was the rubbish of many years, which no one had thought worth the trouble of destroying. On clearing out these odds and ends, certain remains came to light, which suggested that the most recent occupant might have been connected with a doctor's family: a rusty set of fearful-looking surgical and dental instruments, apparently more fit for use on dumb beasts than on human beings,—viewed from the vantage point of the present; a tin tube, 21½ inches long by 2¾ inches in diameter, containing a number of manuscripts, a few printed pamphlets, an old diploma.

The diploma, *Medicinae Doctoris*, was issued by New York University to James Hamer, Jr., in 1844, assuring him *omnia Jura, Honores, Privilegia ad illum gradum pertinentia.* The *General Alumni Catalogue of New York University*, 1833-1907,[1] lists James Hamer in the class of 1844; born at Skippack, Pennsylvania, November 28, 1819; died, March 24, 1900, Collegeville; contributor to medical literature. The Hamer gravestone, in the Reformed Church cemetery, Collegeville, bears the inscription:

JAMES HAMER M. D.
1819–1900

According to M. Auge, in his *Lives of Eminent Dead and Biographical Notices of Prominent Living Citizens of Montgomery County, Pa.*,[2] Dr. Hamer's ancestors received a patent "for three hundred acres of land in Providence township," Fifth month 20th, 1717. The original James Hamer who received this patent, was apparently "blacksmith, storekeeper,

[1] P. 6.

[2] Author: Norristown, 1879.

and cobbler combined."[3] The family were Welsh Quakers. James Hamer, Jr., recipient of the diploma, was the son of James Hamer, Sr. who began to study medicine with a Dr. Griffith, of Bucks County, and continued as a student under Dr. Wistar and others at the University of Pennsylvania, in 1810 and 1811.[4] He began practice at Skippackville, 1812, and continued there until 1844, when his son, fresh from study in New York University, joined him in practice. One of the pamphlets, the *Twenty-First Annual Report of the Managers of the New York Asylum for Lying-in Women*, March 23, 1844, lists Dr. James Hamer, 285 Bowery, as one of the district physicians. He is said to have practised for a few years at Oneida, New York, then at Kulpsville, and later at Collegeville, Pennsylvania. His son, James H. Hamer (1847-1925), was the third doctor in as many generations, whose combined years of medical practice spanned the days from saddle bags to horse and buggy and the horseless carriage.

One of the manuscripts, 12¼ x 7⅞ inches, closely written, treated the interesting question, "An inquiry into the reason wherefore medical men so widely differ in respect to the treatment of certain diseases?"—a paper addressed to the "Members of the Montgomery County Medical Society."[5] The paper bears the date "October 19th 1850." and is signed "James Hamer Jr." Though useless as science today, it is an interesting testimonial as to the status of medical knowledge regarding "fevers," their causes, and cures. In it, too, is to be remarked a tendency to give space to old systems, arguments, ideas and abstract reasoning, which was

[3] Auge: *op. cit.*, 131; see, too, an account of James Hamer, Sr. and Jr., in Theodore W. Bean's *History of Montgomery County*, Everts and Peck, Philadelphia, 1884.

[4] Card catalogue of students, Recorder's Office, University of Pennsylvania.

[5] The Montgomery County Medical Society was organized in January, 1847, antedating the state organization a year. At the outset four regular meetings were held each year, and occasional special meetings. It was the Society's custom to appoint lecturers to read papers from time to time. On April 20, 1850, Dr. James Hamer, Jr. was appointed to be the next lecturer, at a meeting to be held, Oct. 19, 1850, at Skippackville. Led by Dr. Hiram Corson, the Society took a distinguished position in opposition to discrimination against women medical practioners (1860), which had been voiced officially by the Philadelphia County Medical Society, laid before the State Medical Society, sanctioned by that body, and then recommended to county medical societies for observance. In 1867, Dr. W. Corson introduced a resolution, which was adopted, to the effect that the State Medical Society "should insist that the medical colleges of this state should admit to their lectures every properly educated person of good moral character without regard to sex, ethnical peculiarities or nationality."—*A History and an Abstract of the Minutes of the Montgomery County, Pa., Medical Society . . 1847-1931.* Prepared by a Committee of the Society, Doctors William G. Miller, J. Newton Hunsberger, and Edgar S. Buyers. The Society, Norristown, 1931. Pp. 7, 13, 21, 76, 96.

later supplanted by experimentation and observation.[6] On these and other grounds, which must be passed over here, the document is of interest and value to the historian, and a curio for the antiquarian. The text of Dr. Hamer's address is unaltered, save as indicated in the notes that have been added for the reader's convenience, and as a lead to anyone who might sometime wish to examine further into the sources of the doctor's views.

"*An inquiry into the reason wherefore medical men so widely differ in respect to the treatment of certain diseases?*"

Gentlemen: Members of the Montgomery county medical society:

Though [7] man is distinguished from the brute creation by the endowment of faculties of the mind capable of progression and improvement; yet there is a limit to human knowledge a bound beyond which human reason has never progressed. There is nothing which is better calculated to impress this fact upon the mind than the practice of our profession. How many sleepless nights has the practitioner of medicine passed who has the good of his patients at heart when disease has baffled all his skill? or what would he give in exchange could human power bring to his aid some remedy which should be effectually able to combat the disease? No man can possibly labour under a greater delusion than a young practitioner of medicine when entering upon the duties of his profession having an idea that he understands his profession well from having read and studied an author on the practice of medicine. The science of medicine can never be reduced to the precision of a mathematical demonstration, or to plain logical reason and deduction, but comes from observation, experience, and judgment or reason all combined always progressing and never perfect. First came observation and experience and then phylosophy [8] or the reasoning part of medicine which latter addition was made by Hippocrates. It is by the cultivation of all these faculties in combination, to the fullest extent which the mind is capable that the best physician is formed.

[6] Cf. R. H. Shryock's observations on medical knowledge and practice in the first half of the nineteenth century, *The Development of Modern Medicine*, Ch. VI. (University of Pennsylvania Press, Philadelphia, 1936.)

[7] While paragraphing is sometimes hinted at by beginning a new line, there is no indentation in the original MS. It is introduced here to facilitate reading.

[8] The spelling, punctuation, and capitalization of the original MS. have been followed; but where the spelling alters the meaning, or changes the name, a question is raised, or the word or name probably intended is inserted in brackets. Letters omitted in the MS. have been supplied in brackets. The modern s has been substituted for the long s.

Diseases are so varied and modified by different causes, circumstances, and peculiarities whether external, or inherent in the human constitution; that we are not able in all cases to follow out any invariable principle, or be governed by any one rule in our treatment. More errors have been committed in the practice of medicine by young physicians, owing to this cause than all others combined. They read an author whose patients were placed under entirely different circumstances and pursue their treatment in conformity to his experience. It is from an observation of the fact that medical authors advise different plans of treatment for the same disease that we are lead to the subject of the present discourse: *An inquiry into the reason wherefore medical men so widely differ in respect to the treatment of certain diseases?* Wherefore is it that we so often behold medical men of equal observation and experience pursuing such diametrically opposite plans of treatment for the same disease and yet bringing forth their array of facts [2] [9] which prove that each has been equally successful? We cannot in this case attribute the different plans of treatment to any error or improper treatment pursued by either physician; there must therefore be some cause or combination of causes to vary or modify the disease which rendered different plans of treatment necessary, consequently in order to derive true light and reason upon the subject we are under the necessity of examining into the causes that have the power of producing this variation. On inquiry we find these to consist of two classes first those which are inherent, or belong to the constitution and second those which are independent of the constitution or operate through external influence.

To the first class belong the temperaments, idiosyncrasies, age, sexual difference, habit the passions and emotions of the mind association and national or family peculiarities and to the second various deleterious substances conveyed through the air as a vehicle and a peculiar change in the condition of the insensible qualties of the atmosphere itself, and climate or temperature together with moisture and substances affecting the digestive organ. Proceeding in order we will discribe. First. The Temperaments: [10] These are certain peculiarities of constitution possessed by different individuals distinguishing them from each other. On this

[9] Figures thus placed in [ ] refer to the pagination of the MS.

[10] The doctrine that predominance of one of the four humors (blood, lymph, bile, and black bile) over the others determined the temperaments and capacities of individuals, is now discredited as vague and unscientific. Compare Gould's *Dictionary of Medicine, Biology and Allied Sciences.* For a modern approach to the question, see W. H. Sheldon's *The Varieties of Temperament A Psychology of Constitutional Differences.* Harper & Brothers: New York, 1942.

peculiarity depends in a great degree the physical powers, the manifestations of the intellect and display of the moral and animal feelings, and by it the whole mind of the individual is so modified that the display may be either imperfect and sluggish or active and energetic. These temperaments or peculiarities of the constitution were at first divided by the ancients into four varieties according as one of the four humours, which they then supposed to exist in the human body predominated. Their classifications were into First the phlegmatic which was caused by an over amount of phlegm or lymph. Second The Sanguine, caused by an excess of blood. Third. The bilious or choleric produced by a surplus of yellow bile. Fourth The atrabiliary or melancholic produced by a surplus of black bile. This was the divission of Galen the first physician who wrote on the subject.

The temperaments now generally enumerated are four. First. The lymphatic, in which the lymphatic system predominates in activity. A person possessing this temperament is characterised by light hair and a round corpulent body. The fat predominates in proportion to the other structures of the animal frame, the flesh is soft, skin pale, pulse soft, weak, and slow. All his movements are sluggish. The mind is irresolute and requires powerful stimulus to be brought into action. He is slow in forming his plans and irresolute in prosecuting them. If a person possessing this temperament ever obtains distinction it is more throug[h] favourable circumstances than his own exertions. There is not much [3] strength of body or power of mind. The aversion to labour is great whether of body or mind and the memory is poor. The struggle with difficulties is not great or long continued but the mind sinks into repose seeking that enjoyment which it feels in having no employment. The persons enumerated as having possessed this temperament are, Pomponius Atticus the friend of Cicero; Monta[i]gne, the Emperor Theodosius, Charles IV of Spain, Augustus King of Saxony and Ferdinand of Sicily.

Second. The Sanguine, in which the blood predominates in proportion to the other parts and circulates with great freedom. This temperament is characterised by light or sandy hair, blue eyes, flored countenance and fair delicate skin. There is great activity of body and mind with but a small amount of endurance. The flow of ideas is rapid but the mind can not be brought into a state of deep study and hard mental labour, there being more of that grace and delicacy peculiar to the female present than of the boldness and endurance proper for a man. The mind is not well calculated to go through with great undertakings as the great ardour and zeal which at first inspires the mind soon exhausts its energies. Many

plans are generally formed but few carried out, on account of the unsteady and unsettled state of the mind. There is mostly a large display of the animal passions. There may be a great versa[ti]lity of talent and the individual distinguished for the extent of his information, but, not often for great judgment and proficiency in any one branch of science. It will be a hard matter to keep the mind on a train of abstract reasoning although the person possessing the temperament may also have a large amount of the reasoning faculties. A man possessing this temperament is generally a great admirer and lover of the female sex and feels the strongest enjoyment from their company and person and often carries these enjoyments to excess which is a continual obstacle to the advancement of the mind in intellectual pursuits. The enjoyment of the pleasures of a physical nature is likely to predominate over those derived from intellectual pursuits. The sanguine temperament disposes the mind very much for social enjoyment and conjoined with certain faculties of the mind in a high state of development the individual is preeminently calculated for the enjoyment of friendly society and the pleasures relating to the family circle are highly prized. The amount of warm feeling enclosed in the breast is great but there is a quickness and hastiness of temper which subjects a person to many vicissitudes and troubles. The mind is continually running into extremes and is much employed in pursuits of a very opposite character and there are generally too many irons in the fire especially if there is a large development of the faculty of hope. This temperament if combined with the lymphatic produces a great amount of indolence both in respect to the intellect and the exertion of the physical powers, and combi[4]ned with the nervous the greatest amount of activity both bodily and mentally and forms the individual for active buisiness. The talent is of the brightest kind but precocious in its growth. It dazzels our vision for a moment by its brightness but like the rainbow in the clouds it is transcient and soon fades away.

According to Richerand [11] the physical traits of the temperament are

[11] Richerand, Baron Anthelme-Balthasar (1779-1840), author of numerous medical works, among them *Nouveaux éléments de physiologie* (1801) which was translated into many languages and had great influence on young students; *Des erreurs populaires relatives à la médecine* (1810); *Histoire des progrès récens de la chirurgie* (1825).—For additional information about most of the physicians mentioned by Dr. Hamer, see the following, from which the notes supplied in the following pages have been chiefly drawn: Atkinson, W. B. *The Physicians and Surgeons of the U. S.* Philadelphia: Robson, 1878; Bayle, A. L. J., and Thillaye, A. *Biographie Médicale.* (2 vols.) Paris, 1855; Callisen, A. C. P. *Medicinisches Schriftsteller—Lexicon.* (33 vols.) Copenhagen, Altona, 1830-1845; *Dictionnaire des Sciences Médicales.* (7 vols.) Paris, 1820-1825;

to be found in the statues of Antonius and the Apollo Belvidere: and the moral physiognomy is depicted in the lives of Mark Antony and Alcibiades. Duke De Richelieu is considered by him to be the most perfect model in modern times.

There is a temperament described as a modification of this the muscular or athletic which is produced by hard labour and muscular exertion. All the outward signs of strength are well marked with little susceptibility to external impressions.

Third. The bilious or Choleric temperament. In this temperament we have dark hair and eyes, and skin of a dark or brown colour. Here the liver was supposed by the anscients to be the most active organ and the bile to predominate in proportion to the other secretions of the body. The subcutaneous veins are prominent. The muscular and osseous systems are well marked, conjoined with great strength of body and firmness of mind. The pulse is not so rapid as in the sanguine but has great firmness. All the organs act with energy and firmness accompanied with great firmness and decission of character. The person is not very graceful and the manner not so attractive as in the sanguine and nervous temperaments. This is the temperament best calculated to strive against and overcome difficulties both mental and physical Instead of that grace and fickleness of mind peculiar to the female sex there is masculine firmness and decission in forming plans and firmness in prosecuting them. There is an inflexibility of temper and the mind when in pursuit of any particular object can neither be made to turn to the right or left. Whether bent on good or evil it is always determined to gain its ends. There has been more good and evil done in the world by individuals of this temperament than those of any other. The passions as well as the intellect and moral faculties act with the greatest degree of firmness and energy and if the individual is possessed of a great amount of the animal passions they are fearful in their action when excited. The most distinguished men who have ever lived were possessed of this temperament in an eminent degree. In proportion as obstacles and difficulties present themselves is the mind incited to renewed and vigorous action. It is not like in the sanguine incited to action on every slight and trivial occasion but the energies are reserved to act on occasions when energy and decission of character are called for when it acts with promptitude and such de[5]cission and firmness that difficulties are overcome which seemed at first

Hirsch, A. *Biographisches Lexikon der Hervorragenden Aerzte.* (6 vols.) Urban und Schwarzenberg: Wien, Leipzig, 1884-1888; Kelly, H. A. *A Cyclopedia of American Medical Biography 1610-1910.* (2 vols.) W. B. Saunders: Philadelphia, 1912.

impossible to be surmounted. This temperament was considered by the ancients as of the highest order and possessed by their most distinguished men. Here according to the inclination of the mind are to be found the greatest virtues and the greatest vices. As an example of the former trait of character Washington our distinguished countryman may be cited and of the latter Tiberius the Roman emperor. The mind of the bilious man is never at rest but is impelled by a continued desire of action. We find in the life of such an individual when combined with the temperament he has a large developed and happy-formed brain a continued series of plans of the most aspiring and lofty nature, enterprises of the boldest and most daring nature and the accomplishment of ends which when first plan[n]ed appeared utterly impossible. The moral faculties are said to be early developed and vast enterprises conceived and excited at an age when the mind is ordinarily far from being matured. The term cholerico-sanguine has been proposed to be applied to this temperament as an excited state of the sanguiferous system accompanies that of the biliary organs. Alexander, Julius Caesar, Brutus, Mahomet; Charles xii. Peter the Great, Cromwell, Sextus, v. Charlemagne, Cardinal Richelieu, Attila, Tamerlane, Richard iii, Nadir Shah, and Napoleon have all been enumerated as examples of this temperament.

Fourth. The Melancholic or Atrabilious temperament. In this form of constitution there was according to the ancients an abundant secretion of black bile supposed to be secreted by the atrabiliary capsules and spleen. In this temperament all the functions of the body are feebly and irregularly performed; the pulse is contracted and hard, the complexion sallow, and the countenance dejected, gloomy and sad. The imagination is clouded with a continued gloom and sadness which is scarcely ever absent. The[re] is no enjoyment in friendly and sociable society, but some solitary place is rather saught for where the mind may be given up to its own gloomy imagination. The individual is always dissatisfied and never contented. This temperament is said to differ from the choleric in the absence of vascular excitement, while there is a derangement of some of the abdominal organs, or of the nervous system. The characters of Tiberius, of Louis XI, Tasso, Pascal, Gilbert, Timmerman, and Jean Jacques Rousseau are considered as examples of this temperament.

Fifth. The Nervous temperament is characterized by small and soft muscles a frame generally slender, features sharp and pointed and hair and eyes of a light colour. This is a temperament that depends greatly on the habit of the individual. Both mind and body are very susceptible to impressions. The activity is great but without much endurance. A

sedentary life is the most common cause of this temperament. It is also produced by sexual indulgence, and a morbid excitement of the imagination. The mind lacks firmness in undertaking and accomplishing any great action. The fickleness and [6] irresolution of mind is too great to accomplish anything that requires firmness and perseverance of character. When modified by a large share of the choleric temperament it is the most favourable perhaps of any for intellectual pursuits, the mind being prompt and enduring in its action. Voltaire and Frederick the Great are given by Richerand as examples of the nervous temperament.

The temperaments are not always natural but sometimes acquired. They are considerably changed by the habits and modes of living as well as by age and climate. Nothing shows more remarkably the influence which the condition of the body has over the state of the mind than intemperance.[12] The most active and vigorous intellect becomes entirely destroyed by intemperance. At the same time that the muscles become soft and flabby and the body puts on the appearance of weakness and imbecility, the mind becomes changed and all the vigour and force is lost. The condition which the constitution assumes from a long continued indulgence in this habit is according to the divission of some physiologists denominated the flaccid temperament. Some individuals require a longer indulgence in certain habits than others to acquire temperaments peculiar to such habits, their natural temperament offering more resistance. The ancient Greek owed in a remarkable degree his superiority over the Persian to his more happy formed temperament or state of constitution. Here was everything favourable for the development of a form of constitution of the higher order. The temperate and congenial climate the temperate manner of living and the athletic sports and exercises all contributed to this strength and activity of body and mind. Climate exerts a great influence in the development of different temperaments. The lymphatic and easy temperament of the laplander and Esquimaux form a remarkable contrast with the choleric and active temperament of more southern climes.

Some physiologists admit only two varieties of temperaments the irritable and the dull or phlegmatic. Wrisberg [13] reckons eight varieties of

[12] M. Auge, in his sketch of the Hamer family,—*Lives of the Eminent Dead . . . of Montgomery County*, 134,—credits it with being "well preserved," "though not so prolific as some others," because its members were "opposed to intemperance." Bean says that Dr. Hamer, though once a Republican, became affiliated with the Prohibition Party.—*History of Montgomery County*, 650.

[13] Wrisberg, Heinrich A. (1739-1808) Professor of Anatomy at Göttingen and Direc-

temperaments the sanguine, sanguineo-choleric, choleric, hypochondriac, melancholic, baeotian, meek, and the dull or phlegmatic. Another divission is into the strong or normal, the rude athletic or baeotian the lively, the restless, the meek, the phlegmatic or dull, the timorous, and the melancholic. Broussais [14] divides them into the gastric, bilious, sanguine limphatico-sanguinious, anemic, nervous, bilioso-sanguine, nervoso-sanguine, and melancholic. Mr Fowler [15] a celebrated phrenologist of our own country in determining the influence which the temperaments exert over the mind says that a divission which appear[s] more adapted for this purpose than any other is into the vital, mental and motive, when the vital organs as the heart and lungs, the mental as the brain and nervous [7] system, and the motive as the bones and muscles predominate respectively over the other parts of the sy[s]tem. He states that he has noticed a remarkable connection between greatness of mind and an expanded state of the chest.

Dr. Thomas [16] of Paris has advanced the theory that when the digestive organs filling the abdominal cavity are large, and the brain and chest small the individual is lymphatic, he is fond of feeding and averse to muscular and mental exertion. When the heart and lungs are large, and the brain and abdomen small, the individual is sanguine, blood abounds, and is propelled with vigour; he is therefore fond of muscular exercise, but averse to thought, When the brain is large and the abdominal and thoracic vi[s]cera small great mental energy is the consequence. Dr Charles Caldwells [17] theory of the temperaments bears a close resemblance

tor of the Anatomical Institute, was an unusually prolific contributor to literature of his field.

[14] Broussais, François Joseph Victor B. (1772-1838) the founder of "physiological medicine," was born at St. Malo, in Brittany. In his later years he belonged to the adherents of phrenology. Author of: *Histoire des phlegmasies ou inflammations chroniques* (1808); *Examen de la doctrine médicale généralement adoptée* (1816); *Examen des doctrines médicales et des systèmes de nosologie . . .* (1821).

[15] Fowler, Orson S. (1809-1887) phrenologist, published an *Answer to Vindex, with Other Phrenological Matter* (1835); with his brother, published *Phrenology Proved, Illustrated, and Applied* (1837); and, in 1840, he and his brother began publishing the *Phrenological Almanac*.

[16] Thomas, de Trois-Vèvres (M. D., Paris, 1816) was the author of *Division naturelle des tempéramens, tirée de la fonctionomie* (Paris, 1821); *Physiologie des tempéramens ou constitutions . . .* (Paris, 1826); co-author, with Renauldin, "Sur l'influence de l'exercise et du répos. . . ." *Jour. Complém. du Dict. des Sc. Méd.*, vol. 15, 1823.

[17] Caldwell, Charles (1772-1853) influential in founding of the medical department of Transylvania University and the Louisville Medical Institute, later merged in the University of Louisville, was the author of many books and pamphlets, many of them controversial in character. Dr. Hamer refers probably to his *Phrenology*, Lexington, Ky., 1824.

to Dr Thomas. In his essey on the temperaments he proceeds. "To the group of organs exclusively, then, I repeat, contained in the abdomen, the thorax, and the cranium, must we look as the main source of human character. And that character is different according to the predominance, in different individuals, of one group or anothe[r], or of any two of them. An equilibrium between the three groups constitutes another variety, bestowing on character a corresponding equilibrium." He then proceeds to shew that man is elevated or lowered in relation to his race in proportion to the development of each of these class[es] of organs. In order fully to illustrate this subject he commences with the worm commonly denominated the grub which is but little else than a mass of abdominal matter and ends with the ape which has the highest cerebral development of all the beings below man.

A very good classification of the temperaments for the purpose of the physician is into the robust, flaccid, and scrophulous or strumous. In the first division or the robust, the muscles are firm and well developed, the pulse not very rapid but firm and regular, the frame stout and well formed, and all the functions of the body performed with vigour. The individual is capable of enduring great mental and physical labour. Those living in the country, taking proper exercise and good nourishing diet and being regular and temperate in their habits are the most likely to possess this form of constitution. A person naturally possessing this temperament may change it by irregular and intemperate habits.

In the second division or that of the flaccid temperament the constitution appears to be in the very opposite state to that of the robust. the muscles are soft and flabby, the [8] functions both bodily and mental are weak and feeble in their action. There is not much endurance of body and mind both being very easily overcome by exertions. This form of constitution is often brought on by intemperance. It is more frequently met with in the city than in the country, being often brought on by anything which is capable of debilitating the constitution.

The third class of persons or those of the scrophulous constitution possess for the most part light hair and eyes and fair delicate skin. This constitution is for the most part hereditary. The frame is of a slender delicate form the upper lip projecting and the delicacy of the constitution remarkable. Damp moist situ[a]tions tend to develop this temperament. Persons who live in low marshy districts and the crowded and ill ventilated parts of Cities, take insufficient exercise and live chiefly on vegitable diet are those who are most liable to develope the Scrophulous constitution. It is most frequently met with in cold and moist countries. By

removing an individual from a warm to a cold damp country it is sometimes developed. The mind is lively, active, and irritable, but incapable of much endurance. The intellect is often of the brightest kind and precocious in its development.

Having thus presented a view of the different temperaments, their classification by different physiologists and their influence over the animal economy and faculties of the mind, our next subject of enquiry will be into the diseases to which each one is the most subject and their power, or influence, over the action of remedial agents. Whatever divission or classification we assume as our standard or guide the organ or class of organs which form the basis of that divission are the most liable to be invaded by disease. In the lymphatic and sluggish it is not natural to meet with diseases arising from over action and an excited state of the brain and nervous system or those of an active inflammatory nature. This temperament is the most liable to be invaded by dropsy and the quartan type of intermittent fever. A predisposition appears to exist in the sy[s]tem, to the invasion of Scurvy, Acute Bronchitis, and passive haemorrhage which are respectively brought into action by their proper exciting cause. The quotidian type of intermitting fever is apt to be protracted in its course through the influence of this form of constitution. The sanguine temperament especially if combined with the bilious is liable to manifest inflammatory symptoms if invaded by vernal intermittents and the type assumed is mostly the tertian form. Remittants are the most liable to take on the inflammatory form, yellow fever and the plague to be the most malignant and fatal in their character and continued fever to assume the violent synochal form. This form of constitution predisposes the individual to Acute Rheumatic affections, Haemoptysis, Urticaria and Females to Menorrhagia, and Dysmenorrhoea. The diseases most common to the nervous [9] temperament are Epilepsy, Catalepsy, Chorea. Chronic Hysteria and Leucorrhoea—A [18] predisposition to the congestive form of Intermitting Fever and Erysipelas of a Typhoid c[h]aracter mostly accompanied with low delirium exists in this form of constitution To the bilious temperament belong diseases of the biliary apparatus. A combination of this and the sanguine temperament predisposes to piles. The melancholic temperament predisposes to Hypochondriasis and the quartan type in ague.

Adopting the divison into the robust, flaccid, and scrophulous, in the robust form of constitution we have the Yellow Fever and Plague assum-

[18] This sentence. written at the top of the page, was evidently intended to follow the—after Leucorrhoea.

ing the most malignant and fatal form, vernal Intermittents often manifesting inflammatory symptems and continued fevers taking on the synochal grade. In Small Pox vascular congestion of the brain is apt to take place during secondary fever and Acute Bronchitis is sometimes as vehement as Pleuritis. The diseases to which this form of cons[ti]tution predisposes are P[l]euritis, Cynanche Trachealis in children, Tetanus, Asthma. Herpes Phlyctenodes and Cynanche Trachealis of children during the early stage of Whooping Cough. The flaccid temperament predisposes the individual to Typhus Fever and the malignant form of Remittents. Small Pox is apt to assume an anomalous character, the quotidian type of Intermittents to be protracted in its course, Measles to take on the congestive form, Erysipelatous inflammation to produce an oedematous state of the parts and Pemphigus to be the most severe The habitual and nonefebrile form of Erysipelas is a disease of this form of constitution In the Scrophulous form of constitution certain structures of the body appear predisposed to inflammation. The glandular structure is that which seems the most subject to disease which manifests itself in childhood by glandular swellings about the neck, slight catarrhal affections, disease of the mesenteric glands, ophthalmia cutaneous eruptions, joint affections and in femal[e] children Leucorrhoeal discharge. Tubercular Phthisis mostly manifests itself in aduld age after exposure to some exciting cause. A predisposition exists to attacks of Tonsilitis, Phrenitis, Chronic Cystitis and disease of the heart. In reference to the employment of remedial agents; in the Lymphatic temperament owing to the dull state of the system, the slothful action of the organs, and the little susceptibility of the nervous system to impressions, medicines are likely to be tardy in their action. Vena Section is not often or to a great extent required. The diseases will not generally require very active treatment. Stimulants are more frequently required and can be carried to a farther [extent] than in the Sanguine temperament.

In the sanguine temperament on account of the irritable state of the system and excitement of the mind which is produced on slight occasions, inflammatory and febrile diseases are apt to occur and morbific and remedial agents to produce their [10] effect upon the system more quickly than in the stern, choleric or melancholic temperament. Every thing of an exciting or stimulating character should be in a great degree guarded against in health for the purpose of protecting the system, and in inflammatory diseases this caution requires peculiar attention on our part, in this form of constitution.

The choleric temperament is not so easily invaded by disease, but when

it is the subject of an attack, the treatment mostly required is of the energetic kind. A [10] In the melancholic form of constitution there being naturally a depressed and not exalted state of the vital actions our judgment must be exercised accordingly in prescribing remedies when the diseases common to this temperament show themselves.

In the nervous temperament the diseases being mostly those that arise from over action and a morbid state of the nervous system remedies whose office it is to affect the nervous system are to be used more than any other. From the great activity of the nervous system persons of this class are the most subject to diseases requiring a tonic plan of treatment. In various diseases to which the female is subject the character of the same disease is changed, and the very opposite plans of treatment made necessary by means of the nervous or a more robust form of constitution.

In the robust form of constitution, the active and inflammatory diseases require the most prompt and energetic plan of treatment. Every remedy that has the power of diminishing the force and momentum of the circulation and reducing the power of the system are to be employed to the fullest extent. The flaccid constitution often requires the very opposite plan of treatment to that of the robust in the same disease. The diseases are not generally so rapid in their course but require patience and perseverance in their treatment. In the Scrophulous constitution the peculiar kind of affections require for their treatment the various preparations of iodine.

Having thus presented a view of the Temperaments we come to the examination of [the] Second Idiosyncrasy. This is a certain peculiarity of constitution which causes the individual to be affected by extraneous substances in a manner different to what mankind in general are affected by the same. The prick of a needle will in different individuals respectively cause great pain and constitutional irritation, syncope, Convulsions or Tetanus and scarcely any perceptib[l]e consequences at all. Some constitutions are not affected at all and others but slightly by the Small Pox contagion. Balsam Copaiba, Valerian, and different articles of diet will in different persons produce Urticaria and different articles of diet in some Diarrhoea. Opium and Tart Emetic as well as other remedies have a peculiar unhappy effect in certain constitutions, the reason of which we are unable to discern. Here there is no outward sign by which we can determine this peculiar action, the opera-[11]tion therefore of remedial agents on constitutions peculiarily effected by their employment can

[10] The author apparently started to express some other thought.

only be determined by observation and experience. We can lay down no rules by which to be governed in these cases, each physician is therefore left to his own observation and experience.

Third: Age. There is a remarkable difference between the constitution of the infant and the adult of mature age, and again between the adult and decrepid old age. The infant is as imbecile in mind as body and incapable of much mental effort. At this age the bones are soft and pliable, the muscles soft and flabby, the skin soft, fair, and tender, the body clothed with adipose tissue, much rest and sleep is required and all the characteristics of the lymphatic coupled with a portion of the nervous temperament are present but as it advances in years these characteristics are generally lost and if a male subject are mostly changed at the age of puberty for those of masculine firmness, the mind instead of remaining, timid, weak, effeminate and irritable becames bold, daring and courageous and with a change in the constitution itself becomes strengthened for bold undertakings; but if a female subject there are after the age of puberty the remains of weakness. As old age advances the temperament of the middle age changes and as the mind becomes weak again the temperament becomes more like that which was possessed in infantile years.

Age has a remarkable influence in predisposing to and changing the form of disease and of course modifying the action of remedial agents. Inflammatory Intermittents are most frequent met with in the young, the tertian type belongs mostly to adult age, the quartan to advanced years, and the quotidian to the young. Gouty inflammation occurs only after the age of puberty and seldom in youth. Rheumatism seldom attacks those of infantile years. Very old people are seldom affected with the acute form but are liable to the chronic variety. Yellow Fever is the most severe and fatal between the fifteenth and forty-fifth year of age and the Synochal grade of fever is the most common during the same period. Typhus in Infancy and old age is very uncommon. The young are the most and the old, sickly and infirm the least liable to the plague influence. In Small Pox children are often attacked with Croup, and elderly persons sometimes carried off by Laringitis. The congestive form of Measels is the most common in children. Old persons are the least subject to the influence of Scarlatina contagion. In Erysipelas the fever is the most apt to assume the synochal grade in adult and middle age. Young people and children are the most liable to Parotitis. Arachnitis is a disease most common to childhood. A spescies of gangrene of the brain unaccompanied with inflammation takes place in very aged individuals but the most active form of Cerebritis occur chiefly in young persons and children. Cynanche

Trachealis occurs mostly in children between one and five years of age. [12] Acute Bronchitis is the most common to childhood and old age and the chronic form mostly attacks old persons during winter. Phthisis Pulmonalis with Melanosis is met with in adult, and most commonly old age. Purulent Ophthalmia is generally much less serious in infants than adults. Strumous Iritis occurs in children between six and eighteen years of age. Herpes Phlyctenodes in children and young people, Purpura Simplex in the young, Herpes Zoster in young persons never in children under three years, Herpes Circinatus, Urticaria, and Roseola most frequently in children, and Pemphigus more commonly in old people than very young. Of Haemorrhages the most active occur in the young, Epistaxes in childhood, Haemoptisis between puberty and thirty. Haemorrhage from the Rectum in middle life and Haematuria in very old people.

Apoplexy mostly happens between the fortieth and sixtieth year of age, Paraphlegia from cerebral affection after the forty-sixth year, and from disease of the Spine in childhood. The strongest disposition to Epilepsy, Catalepsy and Chorea exists at the age of puberty. The vascular turgescence of the brain which in adults causes Coma or Apoplexy is the cause of convulsions in Infants. Hysteric Stupor occurs mostly in young unmarried females. The liability to mental derangement is greatest between the twentieth and fortieth year verry rarely occurring before puberty or during old age. Tetanus mostly occurs in the young rarely in advanced age. New born infants are peculiar[ly] liable to this affection. Asthma is very rare before the age of puberty and Whooping Cough occurs almost exclusively during childhood Angina Pectoris seldom under forty. Haemorrhoids are uncommon before twenty-one from thirty to fifty being the age during which they generally manifest themselves. Diabetes Insipidus is most commonly met with after the middle period of life and the Yellow lithates in the Urine during childhood. The disposition to form lithic acid deposit is least between the ages of puberty and forty but after this period there is a disposition in the constitution not only to secrete a larger quantity but to seperate it in a concrete form. Eneuresis nocturna is common among children. Plethoric subjects after the middle period of life are the most subject to Hydrothorax and Dysmenorrhoea is most common between the twentieth and thirtieth year of age. In respect to the action of remedial agents the young as a general rule are the most easily affected and the aged the least so yet they are not able to bear the same powerful impression as those of middle and mature age.

Fourth. Sexual difference. In the female Sex the bones remain after

the age of puberty soft and smooth, the muscles are soft and small, the skin tender, fair, and delicate, the pulse small and quick, the adipose tissue considerable, the mind active live-[13]ly, irritable, fretful, easily disturbed by emotions and fickle, and the movements of the body active, graceful and easy. The male has occasionally the characteristics of the female and the female those of the male and when this is the case the habits peculiar to their own are changed for those of the other sex. By the loss of the ovaries in the female sex such a change is wrought in the animal frame, that it takes on all the appearances which should characterize that of the male; the voice becomes firm and deep toned, the beard makes its appearance in the face, all of that modesty peculiar to the sex is lost and all the desires, habits, and pursuits become markedly masculine; but if a male loose his testicle instead of retaining the masculine characteristics they are entirely changed and become thoroughly effeminate, the voice is shrill, no beard makes its appearance on the chin and the disposition and all the habits become effeminate.

The peculiarities of sex as well as those of age predispose the constitution to different diseases and tend to modify the action of remedial agents. Females are not only less susceptible of Yellow Fever but are rarely attacked by the more severe forms. It is in them generally mild unless during pregnancy when it is almost invariably fatal. The quotidian type of Intermitting Fever is the most frequent in women of inactive life. When Goitre occurs in females after marriage it is commonly during pregnancy. Gonorrhoea is mild in women and seldom if ever extends to the urethra. The following diseases are most common to the male sex; the Plague, Gout, Haemorrhoids, Diabetes Mellitus, Herpes Zoster, and Paraphlegia from cerebral affection and to the female sex Chlorosis, Pemphigus, Urticaria, Eczema, Roseola, Paraphlegia from disease of the spine, Hysteria, Hysteric Stupor in young unmarried females and Mental Derangement. The female owing to her natural difference of constitution generally requires a much smaller dose of any active medicine than the male.

Fifth: Habit. The action of remedial agents are very much changed by habit. Some medicines by frequent repetition require a larger dose to produce the same effect as for example the tonics and most of the cathartics when administered within a few days of each other, while others as the different saline cathartics require to be administered in smaller doses to produce a like effect.

Six: The passions and various mental emotions of the mind have a powerful effect in producing and modifying disease and changing the

action of remedial agents. I suppose that we have all heard the story of the old professor who was made the subject of an experiment by his misc[h]ievous student after having advised him as he was about to enter on the duties of his profession to remember that conceit would cure and conceit would kill? Anger and impatience will sometimes render a wound, ucler, or inflammation more obstinate and intractable and make necessary a plan of treatment which would [14] not otherwise have been required. Anger is exciting, hope soothing and fear and despondency depressing to the vital powers. Typhus Fever is modified and influenced in a remarkable degree by despondency. The system is powerfully predisposed to the inception of contagious diseases through the influence of fear. Erysipelas is sometimes caused by strong and sudden mental emotions. Chronic Gastritis, Acute Hepatitis Arachnitis, Cerebritis, Tubercular Phthisis, Pericarditis, Gout, Phosphatic Diathesis, Scrofula, Chlorosis, Cholera Asphixia, Passive Menorrhagia, Hysteria, Haemorrhoids, Diabetes Mellitus and Lithic Acid Diathesis are all either produced or influenced by the depressing passions or mental emotions, Acute Hepatitis by violent rage or terror, Phrenitis by the exciting passions, Pericarditis by over exertion of the mind, Scurvy by anxiety of mind. Amenorrhoea by mental emotions. Herpes Phlyctenodes by grief. Urticaria by mental excitement. Lichen by mental affections, Haemoptisis by violent mental emotions. Apoplexy by mental excitement, intense and protracted study and deep sorrow. Epilepsy Hysteria and Chorea by violent mental emotions. Catalepsy by disappointed love. Puerperal convulsions the hysteric variety by mental emotions. Hydrophobia hastened by vehement mental emotions. Mental Derangement by passion and affections of the mind. Amaurosis by sudden mental emotions. Asthma by violent mental emotions. Disease of the heart by mental agitation Indigestion by mental emotions. Diabetes Mellitus by protracted grief and deep sorrow. Diabetes Insipidus by violent passions, Lithic Acid Diathesis by mental exertion. It is a great aid and assistance to the physician to be able to exert a proper influence over the various feelings and passions, and their power of aiding and modifying the action of remedial agents ought to be borne in mind as one important point in the treatment of disease

Seventh: Association. This principle often exerts a powerful influence over disease All the paroxysmal, nervous, and spasmodic affection often depend for their continuence upon this cause and among these none more so than Epilepsy.

Eighth: Family and National peculiarities: Tubercular Phthisis is almost if not always dependent upon family peculiarity. The various

scrofulous affections are mostly and Diabetes Mellitus, Haemorrhoids, Disease of the heart, Asthma, Mental Derangement Infantile convulsions, Epilepsy, Apoplexy, Haemoptisis, Cynanche Trachialis, Arachnitis, and Gout sometimes hereditary or peculiar to certain families. Instances have been recorded in which members of the same family have sickened and died during the same season and near the same time with the same type of fever although situated 50 or 100 miles from each other and [15] having had no communication for years which facts can only be accounted for on the principle of a family peculiarity or predisposition to the disease which was excited into action by some general cause. Diseases of a certain kind have attacked individuals of particular nations whether inhabiting their own or other countries while those of other nations have at the same time been entirely exempt from the attack. Such was the sudor anglicus which occurred about 1483 affecting Englishmen only and the Bancker street fever of 1820-21, which prevailed in New York affecting only the coloured population. May we not infer from these facts that the same disease is sometimes modified by national peculiarities, and requires a corresponding modification in the treatment? And is it not often the cause of medical contentions assuming a national character?

The limit which it is necessary to assign to the present discourse will not permit me to enlarge on this point I therefore proceed to Class: Second: Causes external or independent of the constitution which modify disease and the action of remedial agents. Here gentlemen is presented to our view a vast field for observation an[d] reflection and he who reduces to a demonstration the causes external to the constitution which produce and modify different diseases at different times and places and render different plans of treatment necessary will immortalize his own name and furnish an incalculable treasure to our profession.[20] We often behold the same disease prevailing epidemically at different times and at each period without regard to age, sex, or constitution assuming a different character and rendering a different plan and sometimes no plan of treatment successful, there must therefore exist a cause or combination of causes external or independent of the human frame capable of producing this result. In determining the reason of these facts our first

[20] The science of the life of minute organisms, "bacteria" or "Bacilli," was little developed when Dr. Hamer read his paper. Nägeli advanced a more exact term "schizomycetes" (1857). The researches of Pasteur (1857) showed lactic fermentation was dependent on present organisms. Due to studies by Pasteur, Cohn, van Tieghem and others whose names have indeed become immortal, the germ theory of disease was on a firm foundation by 1870, and has since come into general acceptance.

object of inquiry will be directed to the remote external cause of certain affections.

In reference to that extensive class of disease which afflict the human race the febrile affections, for the prevalence of the intermitting and remitting variety as well as Yellow Fever it is now a well ascertained fact that there must be generated a certain peculiar effluvium of poison from the decomposition of animal and vegetable production, requiring for its production a certain degree of heat and moisture and having its copiousness and virulence increased by the mixture of fresh and salt water in marshes. In reference to the nature of this production we possess no certain knowledge the air containing it being found to possess the same principle and in the same proportion as pure air on the application of the most delicate chemical reagents. That other variety of fever the continued form requires for its production the generation of a spescific poison from confined human excretions under concurrent general causes. With regard to this form of fever generating a peculiar [16] virus in the system of those affected capable of communicating the same disease to the healthy subject is still a subject of some dispute among the profession English physicians almost universally maintaining the affirmative while the majority of French and German physicians maintain the contrary opinion. The same dispute is there in reference to the Plague, but whatever position be true concerning its power of communication some poisonous principle produced from public filth under the influence of climate and temperature or some inappreciable quality of the atmosphere or epidemic influence appears to be a necessary cause and this like marsh miasmata is rendered more virulent and powerfull by its proximity to the sea as the disease originates in towns situated on the sea coast and the mortality is ever the largest in those towns. In reference to the quality and nature of this principle we know absolutely nothing. But whatever dispute there may be concerning the infection of Continued Fever and the Plague the infectious and contagious nature of the Eruptive Fever is an undisputed point. In Small Pox the peculiar miasm is given off both by the skin and lungs at every period of the disease. Measles and Scarlet Fever both generate their own spescific poison capable of producing the same disease in healthy subjects. They prevail in every clime and at every season of the year. Puerperal Fever and Erysipelas seem to be dependent for their prevalence at times upon the generation of a spescific poison. In reference to the contagious nature of Puerperal there is a difference of opinion.

Having thus presented a synoptic view of the remote causes of febrile disease we are brought to the consideration of the modification and varia-

tion in the character and nature of the same disease and the necessary difference of treatment together with the reason of the difference. Although the Intermitting Remitting and Yellow Fever have one remote external cause necessary for their formation yet they vary greatly in their nature and character at different times and places. Intermittents assuming the inflammatory form generally occur during winter and in Spring and those and those [*sic*] taking on the gastric form generally during autumn in the temperate climates To hot climates belongs the malignant form. The quotidian form is always more severe in winter and autumn than spring. The quartan occurs mostly in autumn more rarely in the spring.

Dr James Johnson [21] observes "The fever of Batavia differs from the fever of Walcherin—the fever of Antigua, from the fevers of the Ganges—and all these differ materially from the plague of the Levant." To Germany belongs as a general rule Intermittents of the tertian type and to Italy the quotidian type. In Hungary paludal fevers are very apt to be attended with patechia [petechia?]. Fevers of the Pontine marshes [17] have short intermissions while those of Holland vary much in their type and are slow in their progress. In Spain, Africa the West Indies, and the southern parts of the United States the black vomit and the yellowness of the skin are accompanying symptoms. The fevers of Walcheron says Dr Macculloch,[22] "differ materially from those of Bresken on the opposite shore of the Scheldt; and in France those of Rochefort differ as completely from those of the Lyonnais." To produce this effect there must be some cause and as koinomiasmata is the remote cause of this form of fever there must be some variation in the intensity or nature of this cause or some other cause acting conjointly to produce this affect. But this principle being derived from decayed animal and vegitable production and as these are of various kinds and can be combined in different degrees and become more or less concentrated, it is fair to infer that this in itself is capable in a remarkable degree of changing the character of the disease. As it is to southern countries that malignant Intermittents belong there must be some powerful impression produced upon the human frame. This severe shock to the system seems to depend upon the malignant and active

[21] Johnson, James J. (1777-1845) served as surgeon in the British Marine forces, and published several works which reflect his observations in various parts of the world, for example *An Essay on the influence of tropical climates, more especially the climate of India on European constitutions . . .* (1813).

[22] MacCulloch, John (1773-1835) published *Malaria: an essay on the production and propagation of this poison . . .* (1827); *An Essay on the remittent and intermittent diseases, including generally marsh-fever and neuralgia*, 2 vols., 1828.

nature of the miasm formed under the influence of climate acting on the human constitution deranged and predisposed to its reception by means of high solar heat.

From the foregoing statement is it not fair to infer that Intermittents of different places and under the influence of climate or temperature and produced by different combinations of animal and veitable [vegetable] decompositions of various kinds are more directly under the controll respectively of different remedies? and is it not one great reason wherefore different medical men have pointed out and recommended particular remedies to the profession remedies which they had found perfectly successful but which in the hands of others had utterly failed? Bleeding was recommended by Macintosh [23] in the cold stage According to the experience of Stokes [24] in some cases the cold and in others the hot stage were increased in violence and in several cases the paroxysms were brought more nearly together. Very great benefit derived from bleeding, in India (Twining.).[25] Benefit in Tennessee (Higgason.)[26] An Emetic recommended at the beginning of the cold stage (Eberle.)[27] A full dose of Opium a short time before the occurrence of the chill (Trotter.)[28] Compression with the tourniquet to arrest the cold stage. (Kellie.)[29] A full dose of Opium is to be given soon after the hot stage is developed (Lind.)[30] Opium is not needed. (Dunglison.)[31] Some advise the employment of barks in large doses immediately after the sweating stage

[23] Mackintosh, John, studied at Edinburgh (1804) and served as physician in the British Artillery in the West Indies, South America and France, and was author of *A treatise on the disease termed puerperal fever*, illustrated by numerous cases and dissections (1823). He died in 1837.

[24] The reference may be to William Stokes (1804-1878) whose studies were accessible; or to William Stoker (*b.* 1773)—if r was the final letter intended, not s—who was a more prolific writer on fevers and their treatment.

[25] Twining, William (1780-1835) was the author of a paper "On the effects of blood letting in the cold stage of intermittent fevers" (1831).

[26] S. W. Butler's *Medical Register and Directory of the United States* (1874) lists William A. Higgason, Kentucky; R. L. Polk's *Medical and Surgical Directory of the United States* (1886) names A. J. Higgason, Mississippi. Whether one of these is cited here is uncertain; no literary remains have been found to aid in identification.

[27] Eberle, John (1788-1838) author of *A treatise of the materia medica and therapeutics* (1822); *A treatise on the practice of medicine* (1830); and *A treatise on the diseases and physical education of children* (1833).

[28] Trotter, Thomas (1761-1832) entered the British Marine service at eighteen, became an authority on scurvy, and published his first work on it, 1785. Besides many other works, he was the author of *A view of the nervous temperament . . . of those diseases commonly called nervous, bilious, stomach and liver complaints . . .* (1807).

[29] Kellie, George, was author of *An account of the effects of compression by the tourniquet, in stopping the cold fit of intermittents* (1794), etc.

[30] Lind, James (1736-1794) was author of *Two Papers on fever and infections* (1763);

has passed off; whilst others recommend it to be given largely as near to the expected paroxysm as the condition of the patients stomach will allow," (Cullen.)[32] Others think it best to exhibit the bark in divided and frequent doses throughout the whole period of the intermission. (Fordyce.)[33] Five grains of the Sulphate of Quinine may be administered about an [18] hour and a half before the paroxysm is expected and five more in an hour afterwards. (Dunglinson.) In two instances, a most singular and raving species of maniacal affection ensued, apparently from taking large doses of this medicine after the chills had commenced (Eberle.) Piperine the best of all febrifuges. (Meli.)[34] Fully equal to any. (Brandolini, Bertini, Gordini.)[35] Fowlers solution superior to the bark in substance, but inferior to the quinine. (Brown.)[36] In cases where the most active preparation failed, bark in substance found to be successful. (Dunglison.) Sulphate of Quinine first, Fowlers solution second, and the Cyanuret of Iron third in value (Stokes.) The Cyanuret of Iron very far inferior to the cinchona and its preparations, and to different indigenous tonics. (Dunglison) The black spiders web prevents the recurrence of the intermittent paroxysms more abruptly and more effectually than even bark or arsenic. (Robert Jackson.)[37] Salicia little if any in-

Diss. de febre intermittente putrida quae in Bengali grassabatur (1768); and an *Essay on the diseases incident to Europeans in hot climates* (1768).

[31] Dunglison, Robley (1798-1869) author of a host of medical books, among them *A new dictionary on medical science* (1833); *On the influence of atmosphere and locality* (1835); and *New Remedies* (1839).

[32] Cullen, William (1712-1790) was a prolific author of medical works, the most important of which were *First lines of the practice of physick; for the use of students* (1777), 4 vols., translated into German, Latin, French, Italian; and *A Treatise on the materia medica*, 2 vols. (1789).

[33] Fordyce, George (1736-1802) was author of numerous works on fevers, such as *A dissertation on fever* (1795), and *On simple fever or on fever consisting of one paroxysm only* (1794).

[34] Meli, Domenico, was the author of *Sulle febbri biliose* (1822), *Sulla condizione patologica delle febbri biliose, nuovi fatti* (1824), and numerous other works.

[35] Aurelius Brandolinus, called Lippus, listed in the Index-Catalogue of the Surgeon General's Office (2nd ser.) as author of *De humanae vitae conditione, et toleranda corporis aegritudine, aureolus libellus*, Paris, 1562, may be meant, but it is doubtful; Bertini, Giuseppe M. X. (*b.* 1694) was author of *Delle febri maligne et Contagiose* (1746); Gordini, Giuseppe, author of *Ricerce di statistica medica sulla citta di Livorno* (1827), with N. Orsini.

[36] Brown, Samuel (1769-1830) was author of *A treatise on the nature, origin, and progress of the yellow fever* (1800).

[37] Jackson, Robert (1750-1827) an English Army physician who wrote extensively on febrile diseases: *A treatise on the fevers of Jamaica* (1791); *Outlines of the history and cure of fever* (1798); *Exposition . . . of affusing cold water . . . as a remedy for the cure of fever* (1808); *A sketch of the history and cure of febrile diseases* (1817); and *A sketch of the history and cure of contagious fever* (1819).

ferior to the quinia (M. Miguel)[38] Sulphate of zinc cured cases in the Philadelphia Dispensary in which both the bark and arsenic had failed (Firth.)[39] Frictions of tartar emetic ointment successful where the cinchona failed. (Pommer)[40] The Artemisia Absinthium (salt of wormwood.) ought to be regarded as at least equal if not superior to bark. (M. Muys.)[41]

Like Intermitting Fever so so [*sic*] do the remitting and Yellow form in intertropical climates, assume the most dangerous and violent character and become attended with some peculiarity of character in different localities. In this climate mild cases of Remitting Fever usually assume the double tertian or quartan type. These fevers depending upon the same cause for their production as the intermitting variety the same remarks that were made in reference to the difference of character assumed in different places by one will also apply to the others.

According to the experience of Eberle and Dunglinson in the majority of cases of Remitting Fever blood letting can be omitted. In the present day bloodleting, both general and local, is almost invariably resorted to. (Shapter.)[42] Blood-letting both general and local should be resorted to in the first stage. (Sir William Burnett.)[43] Emetics deterimental (Eberle.) The employment of emeto-cathartics beneficial (Chisholm.)[44] Emetics hurry on with greatly increased gastric irritation, the second stage, of the disease. (Lind.) Some French writers oppose entirely the administration of purgatives. Calomel to be administered very freely

[38] Miguel was author of a description of a *Bauerwetzel*—Epidemic (angina parotidea) in Horn: *Archiv. für med. Erfahr.*, 1822.

[39] Of several doctors listed in the directories of Butler (1874) and Polk (1876), either Henry E. Firth, Brooklyn, Henry S. Firth, Brooklyn, or Henry S. Firth, Williamsburgh, may be the one named here, but no literary remains have been found to make identification possible.

[40] Pommer, Christoph Friedrich von (1787-1841) author of *Beiträge zur näheren Kentniss des sporadischen Typhus und einiger mit ihm verwandten Krankheiten, gegrundet auf Leichenoffnungen* (1821).

[41] The reference may be to W. W. Muys (1682-1744) who published *Diss. et observat. de salis ammoniaci praeclara ad febres intermittenes usu* (1716).

[42] Shapter, Thomas, M. D., Edinburgh, 1831, is probably the one referred to here.

[43] Burnett, Sir William (1779-1861) was the author of several papers such as: *A practical account of the fever commonly called the bilious remittent . . . during the years 1810-1813,* (1814); *Official Report on the fever . . . in the year 1823* (1824); and *An account of contagious fever . . . amongst the Danish and American prisoners of war . . . 1813-14* (1831).

[44] Chisholm, Colin (1755-1825) was the author of numerous works on fevers, among which was a *Manual of the climate and diseases of tropical countries. . . . Calculated chiefly as a guide to the young medical practitioner, on his first resorting to thost countries* (1822).

during the first two or three d[a]ys. (Eberle) Sudorifics to be used (Shapter.) Sudorifics never attended with the smallest advantage, especially when employed in the early stage. (Burnett.) Little or no advantage derived from the ordinary diaphoretics in the higher grades of the disease (Eberle.) Bark vigorously exhibited as soon as a considerable remission occurs in the disease (Lind, Clark, Balfour)[45] This practice injurious. (James Johnson, Burnett.)

Yellow Fever. Bloodleting early and very efficiently practiced. (Eberle, Rish, [Rush?] Jackson. Bancroft.)[46] As a general rule blood-letting is inadmissable. (Wallace.)[47] The use of the lancet condemned. (West India physicians and many American and Spanish.) [19] Purgatives administered to a very great extent. (Rush.) Much milder medicines administered (Hillary, Hume, Clerrey.)[48] Emetics strongly recommended. (Arejula.)[49] Emetics excited the irritability of the stomach. (Bancroft.) Emetics with justice condemned. (Eberle. Shapter.) Diaphoretics recommended by some. (Eberle.) I cannot join in their commendation. (Bancroft.) The mercurial treatment the sheet anchor. (Chisholm. Rush.) Experience has sufficiently proved that no dependence is to be placed on mercurial preparations of any sort (Louis.)[50] The administration of Mercury often attended with beneficial results. (Shapter.)

[45] Reference is probably to John Clark (1744-1805) author of *Observations on fevers, especially those of the continued type* . . . (1782) and papers on kindred themes, or to James Clark, the author of *A treatise on the yellow fever, as it appeared in the island of Dominica in the years 1793-96* (1797); Balfour, Francis, published *On the influence of the moon in fevers* (1784), *A treatise on putrid intestinal remitting fevers* (1790) and a *Memorial presented to the East India Company, comparing his own practice in malignant, bilious, yellow . . . fevers* (1790).

[46] Rush, Benjamin (1745-1813) fought heroically during the fever epidemic in Philadelphia, 1793. Of many papers on the subject may be mentioned an *Inquiry into the origin of the epidemic fever* (1793); *Observations upon the origin of the malignant bilious or yellow fever . . . and upon the means of preventing it* (1799); Bancroft, Edward, lived some time in Jamaica and Guiana, was later member of the Royal Society, London, wrote on questions of military medicine and *An essay on the yellow fever.*

[47] The reference may be either to the dissertation *de febre intermittente* of Francis L. Wallace, M. D., Edinburgh, 1831; or that of Rufus A. Wallace, M. D., Lexington, 1831, *On Congestive bilious fever.*

[48] Hillary, William (*d.* 1763) was author of *Observations on the changes of the air and the concomitant epidemical diseases of the island of Barbadoes. To which is added a treatise on the putrid bilious, commonly called the yellow fever* (1759); Hume, John Robert (1781 [?] -1857) studied medicine at Glasgow and Edinburgh, and received the M. D. at St. Andrews'; all efforts to locate Clerrey have been unsuccessful.

[49] Arejula, Don Juan Manuel (*c.* 1770-?), devoted much of his literary effort to yellow fever, which he had opportunity to study in the epidemic in Malaga and Cadiz. His description of this epidemic, published 1803, was translated into many tongues.

[50] Louis, Pierre C. A. (1787-1872) author of *Recherches anatomiques, pathologiques,*

From five to ten grains of Quinine may be administered every hour or two during the remissions. (Eberle.) From 20 to 80 grains of Quinine administered in the very incipiency of the disease and it acted like a charm (West India physicians.) It seems quite impossible to explain how up to the time of his death large doses of the bark should have merited the special favour of Dr Lafuente [51] (Dr Gillkrest.) [52] Opium, ether, lime water &c applauded by some and condemned by others.

I cannot stop now to inquire how far all these different plans of treatment had any connection with modifications of the same disease in different localities but will only examine briefly into the diametrically opposite plans of treatment pursued by Dr Rush and the West India practitioners in Yellow Fever. Was not the character of the Yellow Fever prevailing in Philadlphia necessarily different in its nature from that of the same disease in the West Indies from the operation of some cause? The reason seems on examination to consist in the fact of the more rapid terrestrial desiccation resulting from high atmospheric temperature and the formation in the West Indies of a miasmatic poison more concentrated and more depressing in its effects upon the vital powers especially of the unacclimated and those having their digestive organs debilitated or unfavourably affected by improper substances introduced into the alimentary canal so as to render obnoxious the a[n]tiphlogistic and make necessary the tonic plan of treatment to support the remaining vitality whereas in Philadelphia the character of the disease was so far modified by a different form or a less intense degree of the miasmata acting upon the system exposed to a less degree of solar heat as to make the antiphlogistic plan of treatment necessary.' When a miasmatic poison enters the system if the impression is too great the vital power is overcome and sinks under the effect, but if less intense compared with the power of resistance there is an effort in the system to overcome the impression which gives rise to more active and inflammatory symptoms and a higher grade of fever. In one case the vital principle is to be supported and in the other the equilibrium is to be restored by reducing the excitement.

In the treatment of Continued Fever General blood-letting, local blood

et thérapeutiques sur la maladie connue sous les noms de fièvre typhoïde, putride . . . (1829).

[51] Lafuente, Don Tadeo, author of *De la preservacion, conocimiento y curacion de la fiebre amarilla* (1803) and *Observaciones justificadas y decisivas sobre . . . la fiebre amarilla . . .* (1805).

[52] Gillkrest [Gilchrist?] James, author of *Exposé des lésions pathologiques observées sur les individus morts de la fièvre jaune à Gibraltar, en 1828*; en réponse à Sir James M'Gregor, *Bull. des Sc. méd.*, Août, 1829.

letting, diaphoretics and sudorifics, cathartics. mercury, opium, wine, cold affusion and nature are respectively trusted in by different physicians. Large and frequently repeated doses of tart· antimonii given without depletion. (Italian Physicians.) Fevers frequently cutshort (Elliotson)[53] Occasionally cutshort [20] (Bright, Addison.)[54] The hope of it cannot be made a foundation for rational treatment (Geor[ge] Gregory.)[55] It is very doubtful whether a true continued fever may be cut short at its outset by any means (Christison.)[56] The cold affusion in the early stage. (Currie.)[57] Abandoned in the epidemic of 1817-20 in the British Islands. by the use of Tart Emet, from one to five grains every two hours very many febrile diseases and Continued Fever among the rest, may be successfully treated (Rasori)[58] No success whatever has attended the trial made of it in the late fevers of Britain (Christison.)

I come now to finish what I have to say in reference to the modification of the same disease at different times in the same place. Intermitting, Remitting and Continued Fever; Small Pox Measles, Scarlatina, and Erysipelas have all prevailed epidemically at different times and varied in nature and character at each period. The circumstances connected with a change in the character of the same disease having one remote cause Koino-Miasmata for its origin are so ably discribed in an account of a malignant Epidemic as it appeared at Jever in East Friesland, in Germany, in the year 1826. by F. A. L. Popken[59] that I have taken the liberty of making some extracts. In chapter first he discribes the region in which Jever is situated as being surrounded on two sides by the sea and the soil as consisting of two kinds, one sandy dry and rather elevated. the other lying lower is rich, moist and clayey. In chapter second giving the history of the disease he says " Though our region had always been fertile in intermittents, the vernal were more frequent than ordinary in

[53] Elliotson, John (1788-1868) author of numerous treatises, some of which set forth the advantages to medical practice of the use of mesmerism.

[54] Bright, Richard (1789-1858) was author of *De erysipelate contagioso* (1813) and served after 1817 for a few years in the Fever Hospital, London; Addison, Thomas (1793-1860) author of *An essay on the operation of poisonous agents upon the living body* (1829), *The Elements of the practice of medicine* (1839), etc.

[55] Gregory, George (1790-1853) published *Lectures on the eruptive fevers, delivered at St. Thomas' Hospital in January 1843* (1843).

[56] Christison, Sir Robert (1797-1882) author of a *Treatise on poisons* (1829); *Dispensary* (1842), and other treatises.

[57] Currie, James (1756-1805) was the author of "Medical reports on the effects of water, cold and warm, as a remedy in febrile diseases" (1797).

[58] Rasori, Giovanni (1766-1837) was the author of *Storia dell' epidemia di Genova negli anni 1799 e 1800* (Milan, 1801) and several other treatises.

[59] Popken, F. A. L., author of the *Historia epidemiae malignae anno 1826 Jeverae observatae* (1827) which gained extended notice.

1826. The constitution for the preceding ten years had been uniformly inflammatory; our fevers had therefore easily yeilded to that mild antiphlogistic practice which is recommended by Van Swieten [60] and Frank.[61] The epidemic constitution had been so uniform that all the intercurrent diseases were of the same character; but a great and universal change of the epidemic constitution, conspiring with a new and very severe disease, which both occurred at the same time, wonderfully confounded the minds of those physicians who were attached to the antiphlogistic method of treatment. As the heat daily increased, those fevers did not as was formerly the case, grow milder, but became more obstinate and were observed to yield no longer to the ancient and happy, mild, antiphlogistic method of treatment. In the beginning of the month of July, when our region, filled with canals almost exhausted by the rays of the sun, presented a vast surface of stagnant water, the first traces of a malignant disease were seen, soon becoming more and more apparent. . . . By the middle of August the mask was laid aside and the nature of this fatal and pestilential disease already raging, through all the vicinity was fully apparent. In chapter third in giving a general description of the disease he remarks " It is further to be noted, that while this epidemic prevailed [21] it seemed to absorb all diseases," . . . What Sydenham [62] observed concerning the plague of London will strictly apply to our epidemic; " this year, fatal to so many thousands, was otherwise very mild and uncommonly salubrious." Indeed what Van Swieten remarks concerning epidemic diseases, " that the valitudinarian, the weak the cachectic, and the gouty, are less affected by them," agrees peculiarly with our epidemic &c. . . . The whole summer of the year 1826 was very dry and warm. . . The effluvium seems to be proto-carbonated hydrogen gas. . . . Sorbait [63] asserts, " that the plague which was raging in the vicinity of Moselle was suppressed as by a miricle, in the season of the vintage " &c. . . . A deluging rain which fell in February, 1825, and almost ruined

[60] Swieten, Gerard van (1700-1772) studied in Leyden under Boerhaave and wrote, among other things, on diseases common in armies (1759) and *Constitutiones epidemicae* (1782).

[61] The reference may be either to Johann Peter Frank (1745-1821) or to his son, Joseph Frank (1771-1842) both of whom contributed extensively to medical literature.

[62] Sydenham, Thomas (1624-1689) " English Hippocrates," as he is sometimes called, was author of *De morbis epidemicis annorum 1675-1680*, to which reference is made here.

[63] Sorbait, Paul de (?-1691) though irregularly educated, became one of the most famous medical men, and was Professor of Medicine at Vienna after 1655 and physician to the Empress-mother Eleonore, 1679. The reference here is to his description of the epidemic that swept Vienna, 1679, taking a toll of 75,000 lives: *Consilium medicum, sive dialogus loïmicus de peste Viennensi* (1679).

our fields, was supposed to have had some agency in producing the epidemic &c. It is not to be denied in those parts of the country, where the water of the sea had remained stagnant from that time, the disease raged the most violent. The first indication in the treatment and the one of the highest importance was as far as possible to sustain the vital powers. Some of the circumstances connected with this epidemic tend to prove what I have stated when speaking of the variation required in the treatment of Yellow Fever in different places.

Having thus in order to furnish proof upon the subject presented an example and given the important points connected with a change in the character of fever arising from Koino-Miasmata occurring in the same place at different periods I proceed in the next place to show that fever arising from Idio-miasmata may in like manner be changed in character at different times. In 1818 the Typhus Fever in the Penitentiary and Alms House in the city of New York, was much more asthenic in character, than that of 1825 and 1827. Treatment in the early stage. Emetics, Cathartics, and antimonials were freely given with the stimulating plan of treatment more especially in the advanced stage. In the fevers of 1825 or 1827 the stimulating plan of treatment was found to be inadmissible even in the advanced stage. The lancet was employed in several instances particularly in the early stage with decided benefit. Facts might be multiplied to prove the same thing in reference to epidemics of other diseases but this would be consuming too much of our time.

The production of different epidemics is explained by some on the principle of meteorations co-operating with local causes. In cases of epidemic catarrh, Influenza &c there must prevail a peculiar condition of the insensible properties of the atmosphere. This change in the insensible properties of the atmosphere giving rise to these epidemics, has been called by J. M. Smith.[64] "epidemic, insensible meteoration," as distin[ct] from sensible meteoration, or change from heat to cold &c. He divides the principles [22] of the atmosphere into ponderable agents as oxygen, nitrogen, carbonic acid, and aqueous vapour and imponderable agents as light, caloric, and electricity. The ponderable agents he thinks can have no direct agency in producing epidemics, as the three first are remarkably uniform at all times and in all parts of the world. But these are universally combined with the imponderable agents, the proport[i]ons of which are variable, as is also that of the aqueous vapour. From this it

[64] Smith, Joseph Mather (1789-1866) had extensive experience with epidemics and wrote: *Elements of the Etiology and philosophy of epidemics* (1824); *Epidemic Cholera morbus of Europe and Asia* (1831).

follows that the qualities of the atmosphere may undergo a variety of changes; for says he, " it is an established truth in chemistry, that the same elementary substances united in different proportions, form compounds different in their proportions; hence it is reasonable to conculude, that certain variations in the proportions of the former, will render the atmosphere insalutary, and destructive to life. After showing that light has no agency of the kind and temperature will not account for it, he then says, " if this view of the subject be correct, it is obvious that many varieties of epidemic meteoration may spring from certain quantities of electricity, concurring with certain proportions of the other variable constituents of the atmosphere; but in what manner these principles are combined with the component parts of the air, or in what proportion they exist in the varieties of epidemic meteoration, we shall not attempt to investigate; as yet, observation and experiment have made no progress towards elucidating this subject."

From the mist and darkness which still hangs around this subject it would be but a waste of time farther to continue our inquiry. All is hypothesis in reference to this invisible change in the atmosphere.

Besides these internal and external causes which I have enumerated as changing the nature of disease and giving rise to different plans of treatment there remains yet one condition to mention which renders different plans of treatment necessary. The same disease originates sometimes from different causes for instance Asthma may arise from irritating matter inhaled into the lungs, gastric intestinal irritation, or the suppression of habitual discharges &c. now it is evident that what will cure one case will not another therefore one physicians experience may sometimes differ from the experience of another solely from this cause.

When we come to reflect how not only one each cause individual but also how different causes in combination may vary the action of remedial agents it remains no longer a cause of wonder that there should be so much medical contention [23] and by the power of reason we are brought irresistibly to the conclusion not to be too hasty in approving or condemning any plan of treatment but to examine first into all the facts and circumstances which are capable of changing the nature of the disease let the principle adopted by each one of us therefore be " Nullum ego cognosco remedium, nisi quod tempestivo usu fiat tale." October 19th 1850.

James Hamer Jr.

Pestilence in India 1856 destroy in upwards of 90.000 persons confined to the female sex. (Medical News. Jan 1857.)

Fig. 1.

Reversed Print.

UNIV. OF MICH.

TWO DIFFERENT PLATES IN WITHERING'S *ACCOUNT OF THE FOXGLOVE*

ESTELLE BRODMAN

In examining a recently acquired copy of the first edition of William Withering's *Account of the foxglove* (Birmingham, Robinson, 1785), the Columbia University Medical Library noticed that the frontispiece appeared to be a reverse of the commonly accepted plate (*Medical Classics*, v. 2, no. 4, p. 305, 1937 and *Bericht über den Fingerhut und seine medicinische Anwendung*. Mannheim, Boebringer [1929]). (See Fig. 1-2). In the Columbia University Medical Library copy, the words *Digitalis purpurea* are at the lower right hand corner (the southeast corner, if the top of the plate is thought of as north), with the large leaf turned up to show its underside, and the small figures no. 2, 3, 9, 10 at the left hand side. The sizes of the two pictures are also different.

A check of other copies showed the following:

Library	Commonly accepted plate	Reversed plate
Army Medical Library, Washington, D. C.	x	
Boston Medical Library, Boston		x
College of Physicians of Philadelphia, Philadelphia	x	
Columbia University Medical Library, N. Y.		x
John Crerar Library, Chicago	x	
N. Y. Academy of Medicine, N. Y.	x	x
Osler Library, McGill University, Montreal	2 copies	
Privately owned, N. Y.		x
U. S. Dept. of Agriculture, Washington, D. C.	x	
Yale Medical Library, New Haven	x	

An attempt was made to determine which was the authentic plate; or, if both were authentic, which was the earlier plate. Two approaches were made: from the name of the artist (J. Sowerby) and from the statement in the Introduction (p. xxi), that the plate "is copied by the permission and under the inspection of Mr. Curtis, from his admirable work, entitled *Flora Londinensis*" (1777).

Fig. 2.

Usual Print.

Both Sowerby and Curtis appear in the *Dictionary of National Biography* and in other places, but no further light is thrown on this problem by the sketches of their life. The plate of the foxglove in the *Flora Londinensis* is identical with the so-called "reversed" plate in the Columbia University Medical Library copy of Withering's work. Even the paper and the watermark in the *Flora* are identical with the "reversed" plate.

From these last facts, we are inclined to conclude that the Columbia University Medical Library "reversed" print may have been the original engraved by Sowerby and printed for the *Flora*. When it was decided to use this plate as the frontispiece for Withering's work, it is possible that all the sheets remaining from the *Flora* were bound into the *Foxglove* until this source was exhausted. It is also possible that the plate was then redrawn by Sowerby or one of his assistants, or reengraved *thru the original*, thus accounting for the mirror-image copy in the more common copies. This is borne out by the wording of the preface which says the plate was "copied." On the other hand, it may be that sometime from 1785 to the present, owners of copies of Withering's book minus the plate have attempted to complete their copies by adding the plate from Curtis' work; however, in view of the expensiveness of the *Flora* when issued and at all times thereafter, this seems unlikely.

The Columbia University Medical Library would be extremely interested in receiving any information on this question. It would particularly like to know of other copies in the United States or Canada which have the so-called "reversed" print, as well as a history of the owners of these copies, wherever that is known.

I should like to thank Miss Gertrude Annan and Miss Bettina G. Thrall of the Rare Book Room of the New York Academy of Medicine; Mr. Charles Adams, Assistant to the Director in charge of Special Collections, Columbia University Libraries, and Miss A. L. Hepburn, Librarian of the Natural Science Libraries at Columbia University for their assistance on this problem.

MEDICO-HISTORICAL NEWS AND ACTIVITIES

AMERICAN ASSOCIATION OF THE HISTORY OF MEDICINE

We regretfully report the death of one of our most faithful members, Captain R. C. Holcomb, U. S. Navy, retired, who died on April 2, 1945. At the time of his death Captain Holcomb was engaged in preparing an obituary of another of our deceased members, Rear-Admiral Charles S. Butler.

CONSTITUENT SOCIETIES

The Beaumont Medical Club, New Haven, Conn.

The W. H. Carmalt Lecture was given at the Historical Library of the Yale University School of Medicine on April 27, 1945. Dr. John E. Donley of Providence spoke on "Harvey, Riolan, and the Discovery of the Circulation of the Blood."

The Johns Hopkins Medical History Club, Baltimore, Md.

The Club held its third meeting of the year on April 23, 1945 in the Lecture Hall of the Institute of the History of Medicine. The following program was presented:

Wartime Influences on the Development of Health and Welfare Institutions in the United States.	Mr. Albert Deutsch
Social Services in a Civil War Hospital in Baltimore.	Miss Genevieve Miller

The New York Society for Medical History

The Society held its regular monthly meeting on April 5, 1945 at Squibb Hall, 745 Fifth Avenue, New York. The speaker of the evening was Dr. Donald D. Van Slyke who discussed "Maintenance of Body Neutrality and the Acid Base Balance."

NATIONAL NEWS

University of Kansas

According to the will of the late Dr. Logan Clendening, the sum of $50,000 has been bequeathed to the University of Kansas Endowment Association to be used for the Department of Medical History. The Department, which now occupies an entire floor in the Hixon Laboratory for Medical Research, was built up largely through Dr. Clendening's efforts. He not only conducted a weekly course in medical history for over twenty years, but also presented his library of medico-historical books and many objects of historical interest to the University. For a description of the Library and Museum of the Department of Medical History *cf.* this *Bulletin*, 1940, Vol. 8, pp. 742-748.

NEWS FROM LATIN AMERICA

Guatemala

A recent letter from Dr. Carlos Martínez Duran informs us of the celebrations commemorating the 100th anniversary of the discovery of nitrous oxide anesthesia by Dr. Horace Wells which were held in Guatemala. Commemorative plaques were unveiled in the School of Dentistry of the Universidad de San Carlos and in the operating room of the General Hospital. In the Library of the School of Dentistry a portrait of Wells was unveiled. Dr. Eduardo Cáceres gave a biographical sketch of Wells and Dr. Carlos Martínez Duran addressed a meeting in the operating room of the General Hospital, discussing the philosophical aspects of the discovery.

Peru

A meeting of the *Sociedad Peruana de Historia de la Medicina* was held on November 14, 1944 under the presidency of Dr. Carlos Enrique Paz Soldán. The central theme of the meeting was Flora Tristán, a French woman whose book "Peregrinaciones de una Paria" is an important source to the history and sociology of Peru. Dr. Luis Alayza y Paz Soldán, an Honorary Member of the Society, spoke on the social aspects of Tristán's life and works; and Dr. Juan B. Lastres, Secretary of the Society, discussed "El centenario de la muerte de Flora Tristán y la paleo-neuro-psiquiatría republicana."

The *Sociedad Peruana de Historia de la Medicina* has recently elected three new Honorary Members. They are Dr. Charles E. A. Winslow of Yale University, Dr. Francisco Fernández del Castillo of Mexico, and Dr. Douglas Guthrie of the University of Edinburgh.

BOOK REVIEWS

ERWIN H. ACKERKNECHT. *Malaria in the Upper Mississippi Valley 1760-1900.* Supplements to the Bulletin of the History of Medicine No. 4. Baltimore: The Johns Hopkins Press, 1945. viii + 142 pp. maps and charts. $2.00.

In this timely and impressive treatise Dr. Ackerknecht has undertaken to present and interpret the history of malaria in the upper Mississippi valley during the 140 years from 1760 to 1900. "The Upper Mississippi Valley was chosen for examination as a region where malaria, after having been once very prevalent, had disappeared spontaneously long before the introduction of any systematic anti-malarial measures; and where, therefore, new insight into the mechanism of the rise and fall of malaria might be gained." For present purposes the area is taken to include the five states bordering the upper Mississippi, viz. Minnesota, Wisconsin, Iowa, Illinois, and Missouri. At the outset it is made clear that malaria has not disappeared completely from the domain under consideration but has merely attained a very low level of incidence. Thus the term 'disappearance' is not to be taken in an absolute sense.

These introductory definitions are followed by two useful prolegomena, the first of which is a general evaluation of the malaria records of the period. Because of their fragmentary, vague, confused, and frequently erroneous character—a reflection of the general and medical development of the region and era—extant records do not equip the historian to study his subject with anything like quantitative precision. In a second prefatory discussion the author reviews the theories which prevailed in America before the work of Laveran. It is demonstrated that although the majority of physicians and laymen believed in a miasma emanating from marshes, a small minority held to the so-called animalcular hypothesis. It is interesting to learn that this doctrine was advocated in Baltimore as early as 1806, and at a slightly later period commanded the support of Daniel Drake.

In the principal section of his treatise the author reviews in turn the rise and fall of malaria in each of the five aforementioned states. The malaria history of each state is also summarized in a graph. For reasons already given, these graphs are necessarily generalized but are instructive despite their limitations. The factual portion of the book closes with a comparison of malaria in the upper Mississippi region and malaria in other parts of the United States.

Having chronicled in detail the decline of malaria in the upper Mississippi region, the author proceeds to consider twelve possible causes. He attaches great importance to two occurrences. These are (a) retardation and arrest in the movement of population, and (b) the shift of settlement from watercourses to regions farther inland. The development of organized drainage enterprises is held to have occurred too late to be credited with an important causative role, although small private drainage enterprises cannot be excluded from consideration. Much importance is attributed to the deviation of mosquitoes by cattle. The general conclusion is as follows:

"At the end of this examination, none of the factors can be singled out as the main

or exclusive agent of liberation from malaria. While the stopping of population movement, the shifting of settlements inland, better housing and increase in wealth seem to have acted in all states, cattle breeding appears to have had an enormous influence in Iowa, Wisconsin and Minnesota, while perhaps only in Illinois and in a limited area of Missouri, did drainage as an isolated factor play a certain role. It is impossible to decide whether one of these factors was necessary in the given situation because none is theoretically indispensable, malaria decline having occurred also in regions where at least one of them was missing."

Of these temperate conclusions it can be said that they go about as far as the evidence will justify. While it would be gratifying to be told categorically that the disappearance of malaria in the upper Mississippi valley was due to deviation of anophelines by cattle or to drainage instituted to improve the usefulness of agricultural property, the historical evidence will support no such unequivocal verdict and it is to the author's credit that he has abstained from forcing the facts in one or other direction.

The methods employed in the preparation of the present volume merit special comment and special praise. It is apparent on every hand that the author has not limited himself to the ordinary medical literature but has consulted a wide variety of general and special writings such as letters, archives, memoirs, novels, and miscellaneous reports. It is evident also that the author has made trips into the field and has had the benefit of discussion with experts. These highly diverse materials multiply the value and fortify the interest of the text. The evidence is evaluated justly and is disposed in a logical manner, the conclusions being achieved after careful and unprejudiced consideration of the best available data. For these reasons Dr. Ackerknecht's book may be regarded as a model of research in the history of medicine.

SAUL JARCHO.

La Raccolta Vittorio Putti, Antiche Opere di Medicina, manoscritte e stampate, lasciate all'Istituto Rizzoli di Bologna. Milano: Istituto Grafico Bertieri, 1943-XXI. (viii) + 107 pp., 4°. Frontispiece portrait.

Vittorio Putti was one of the world's great orthopedic surgeons, equally well known in Europe and in America where he had many friends. But he was more, a humanist, historian, connoisseur of art, and a passionate lover and collector of books.

Ugo Ojetti in a warm introduction to the present volume says of him: "He certainly was greatly indebted to God, and first for his handsome, and manly and cordial appearance that immediately captured the minds of the students and of all who listened to him, during classes and afterwards in informal conversation when he freely gave from his experience and knowledge to colleagues, known and unknown, for his sensibility almost instinctively distinguished and sized up the honesty and loyalty of the many who crowded to consult him." I was one of the many who were kindly received in the sanctum of his study, in San Michele in Bosco, once a monastery, built in the 15th century on top of a hill, overlooking Bologna, now the famous orthopedic Istituto Rizzoli of which Putti was director for

many years. The first question he addressed to me—in excellent English—was to inquire after Harvey Cushing with whom he had so very much in common.

When Putti died a few years ago he left his collections to his Institute, and the present book is not a catalogue of the entire collection but of his old manuscripts and printed medical books and of a collection of autographs of physicians and scientists.[1]

The collection described—very competently—in this book is remarkable not for its quantity (1158 items) but for its high quality. It is easy to gather a large collection in Italy where old medical books are plentiful and many are cheap, but Putti was a very discriminating collector who, as he once told me, added only good books to his shelves, books that he was assembling from a few definite points of view. As a surgeon, he wished to possess the works of his predecessors, the great surgeons of the past, and among the manuscripts we find Guy de Chauliac, Guglielmo da Saliceto, Ronaldo da Parma and others; among the incunabula, Petrus de Argellata, Hieronymus Brunschwig, and many others. This is probably one of the best collections of early surgery, and orthopedics is particularly strongly represented with all the works of N. Andry down to less known items such as Du Verney's *Traité des maladies des os*, of 1751, Dudon's, *Manuale del ortoiatro* of 1825, or Vincent Duval's *Traité pratique du pied-bot* of 1839.

Then Putti was greatly interested in the rich medical history of Bologna and was a keen collector of the works of such masters as Berengario da Carpi, Aranzio, Malpighi. And finally the collection includes the great medical books of all times from Hippocrates to Avicenna to Vesalius, Harvey, Boerhaave, Auenbrugger, Pasteur, with many rare items such as Canani's *Musculorum humani corporis picturata dissectio* of 1541, one of the 12 copies known to exist.

The catalogue was privately printed in 200 copies, on excellent paper, in beautiful type. General Edgar Erskine Hume who is at present in Florence as military administrator of that section of Italy, very kindly sent 4 copies of the book to the United States, one each to the Library of Congress, the Army Medical Library, the Library of the New York Academy of Medicine, and the Welch Medical Library. It is good to know that the man who has the difficult task of administrating in uniform a foreign land, is not only an able soldier, administrator and physician but a historian and humanist also who is aware that what is entrusted to him is our common cultural heritage.

HENRY E. SIGERIST.

[1] The collections not listed in this book include 1373 modern books, 1760 volumes of journals, 8352 pamphlets, 720 portraits, 199 medals, and a collection of old surgical instruments.

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